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ABSTRACT

This collection contains abstracts of research projects in agricultural education completed from September 1, 1986, to August 31, 1987. Abstracts on a wide array of subjects are arranged by state and indexed by both author and subject. Another section lists titles of research in progress also arranged by state. A total of 166 research abstracts of staff studies have been printed. Of this number, 96 abstracts are of master's papers or theses, 35 abstracts are of doctoral dissertations, and 35 abstracts are of other staff studies. Twenty-five institutions from 23 states contributed to this volume. ERIC accession numbers for previous regional and national summaries are included near the end of the document, along with a listing of previous national editors. (KC)

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1986-1987

Summaries of

Research and Development Activities

In

Agricultural Education

Completed in the United States of America

Agricultural and Occupational Education

Department of Education

College of Agriculture and Life Sciences

Cornell University

Ithaca, New York

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SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES

IN AGRICULTURAL EDUCATION

in the
United States of America
1986-1987

Compiled and Edited
by
Dean Sutphin

Agricultural and Occupational Education
Cornell University
Ithaca, New York 14853

February 1988

PREFACE

This document is the thirteenth annual Summaries of Research and Development Activities in Agricultural Education in the United States. The "Summary of Studies" includes abstracts of completed research projects from September 1, 1986 to August 31, 1987. Abstracts on a wide array of subjects have been included with an index being provided at the end of the document. Additionally, titles of research in progress have been compiled and included in the Summaries.

A total of 166 research abstracts of staff studies have been printed. Of this number, 96 abstracts are of master's papers or theses, 35 abstracts are of doctoral dissertations, and 35 abstracts are of other staff studies. Twenty-five institutions from 23 states contributed to this year's Summaries. Similarly, the research and development activities in progress are listed alphabetically by state in section two. Eric accession numbers for previous regional and national summaries are included near the end of the document along with a listing of previous national editors. Both an author index and subject index for the abstracts of studies completed is found at the end of the Summaries.

This publication is authorized by the Research Committee of the Agricultural Education Division, American Vocational Association (AVA). Additional library or personal copies can be purchased for $9.00 each from the editor. A limited number of copies will be available.

As editor, I would like to recognize the assistance of Andy Buck, graduate student in Agricultural Education, in compiling the document and preparing the index. Sherri Howell and Ginny Burness contributed their time to manage the account for the publication and for typing, respectively. This Summaries was only possible because of the efforts at each contributing institution. A special thanks is due to the many contributors. In addition, I would especially like to recognize Dr. Jeff Moss, previous national editor, and Dr. Stacy Gartin, Chair of the Agricultural Education Division Research Committee.

David L. Call, Dean of the College of Agriculture and Life Sciences; Norman R. Scott, Director of Research; and Richard E. Ripple, Education Department Chairman are recognized for their administrative support which made this publication possible.

I hope that this publication will be a useful resource for agricultural educators.

Dean Sutphin
Editor

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ARIZONA

Bennett, Fred A. (1986). Analysis of occupational employment data for agricultural education. Master of Agricultural Education Report, The University of Arizona, Tucson.

The primary purpose of this study was to identify a procedure that could be followed to quantify occupations requiring agribusiness competencies in selected industries. The target population used for the study was all industries in Arizona which require agribusiness competencies. The study was of a descriptive nature. The sample used was all Uninsurance Employment reports (ES-202) in the Department of Economic Security--no survey.

The findings of the study included: (1) There are a large number of codes which have to be understood in order to analyze occupational employment data; (2) there are many (82) occupations which require agribusiness competencies in Arizona; (3) there were 113 industries which hired people in occupations requiring agribusiness competencies; (4) in Arizona (1984-86) the estimated agribusiness employment is 48,113; (5) the results of this study were higher by at least 180 percent compared to estimates of agribusiness employment.

Brew, Tasha Marie. (1987). Integrated pest management programs in cooperative extension. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to assess the adoption response of cotton growers to Integrated Pest Management (IPM) programs, identify the extension strategies used to promote IPM, and provide descriptive comparison of IPM programs between the foremost eleven cotton-producing states in the United States. Integrated pest management is presented as an alternative agricultural production strategy referred to as sustainable agriculture. IPM programs for cotton were evaluated by use of a survey instrument and telephone interviews with the IPM coordinators for the eleven cotton-producing states. The most significant findings were that programs vary considerably between states; the most widely employed IPM techniques were selective use of chemicals, use of economic thresholds and sampling for pests; the Cooperative Extension Service worked closely with private consultants and grower associations; and adoption of a wide variety of IPM techniques has been extensive for cotton producers in the eleven foremost cotton-producing states.

Cox, David E., Sproles, E. K., and Sproles, G. B. (1987). Learning styles and their demographic variations among vocational agriculture students. Staff Study, The University of Arizona, Tucson.

The purpose of this study was to describe the preferred learning styles of secondary school students enrolled in vocational agriculture and to assess variations in learning styles by grade levels, years of vocational agriculture coursework completed, and gender. The learning styles which were preferred by the subjects included (1) serious, analytical learner; (2) active, practical learner; (3) observation-centered learner; (4) passive accepting learner; (5) concrete, detail, fact-oriented learner; and (6) non-adaptive, struggling learner.

Further findings resulted in the isolation of at least three factors which were tested by factor analytic procedures and found to be associated with variations in preferred learning styles. Those were: grade level, years of vocational agriculture completed, and gender.

Continued research was recommended to further characterize and categorize learning styles of secondary school students as well as further validation of the assessment instrument.

Edmundson, Andrea Louise. (1987). Executive skills in selected agricultural professions. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to identify the executive skills employed by County Extension Directors (CEDs), Trade Association Directors (TADs) and Team Leaders/Chiefs-of-party (TL/COPs), to determine which frequently used executive skills were common to all three positions and to identify the major source of executive skill acquisition.

Analysis of the executive skills employed by CEDs and TL/COPs (the TADs were excluded from this analysis for statistical reasons) revealed 34 frequently used executive skills common to both groups. These were in the areas of problem-solving, group dynamics, decision-making, coordinating, communication and organization. Most respondents acquired their executive skills on the job, but 85% held Bachelor's degrees and over half of those were in agricultural disciplines.

Study results indicated an opportunity for Colleges of Agriculture to develop executive skill curricula in addition to technical curricula at the undergraduate level. Internships and experiential classroom activities were recommended to facilitate executive skill development.

Henry, Michael E. (1987). Student self appraisal/teacher evaluation of student competence. Master of Agricultural Education Report, The University of Arizona, Tucson.

The purpose of this study was to assess the feasibility of a self-evaluation/teacher-evaluation procedure for determining student level of competence in vocational agriculture. A comparison of the results of this evaluative process with the more traditional written examination was used to measure efficiency.

Students from three different Arizona high schools, with vocational agriculture programs specializing in horticulture, were tested, asked to complete a self evaluation and their teachers asked to complete a student evaluation for each participant.

A statistical significant correlation was found to exist between student self rating and teacher rating, (.6362 $p < .001$), and between student test score and teacher rating, (.4735 $p < .001$). Also discovered was a correlation that was statistically significant between student self rating and student test score, (.2898 $p < .05$).

It was concluded that student self evaluation and teacher evaluation of student's level of competence should become an integral part of student evaluation, and that student competence not be predicated exclusively on a written test.

Toure, Ndeye Mama. (1987). Value of 4-H membership as perceived by Arizona 4-H alumni. Master of Agricultural Education Report, The University of Arizona, Tucson.

The purpose of this study was to determine the value of 4-H membership as perceived by Arizona 4-H alumni. Value was defined as a composite of usefulness, profitability and satisfaction. The nature of the research was a descriptive survey. The survey instrument, a mailed questionnaire, was sent to 141 former 4-H members whose names and addresses were available at the State 4-H Office at the University of Arizona.

The results of the study showed that Arizona 4-H alumni were exposed to life skill, knowledge and attitude areas in accordance with the 4-H mission in Arizona. Arizona 4-H alumni perceived that their 4-H membership had a positive impact on their adult lives and was of value. "Leadership" was perceived as the most valuable area learned, followed by "self-confidence" and "human relations", while youth leadership and public speaking were perceived as the projects that had the greatest impact on adult life. Sex and length of membership did not influence the perceptions of usefulness of 4-H membership.

Bray, D.R. (1987). Impact of on-site instruction by a state dairy extension specialist on the reduction of mastitis and improvement of milk quality in Florida. Master of Science Thesis, University of Florida, Gainesville.

The purpose of this study was to determine the impact of on-site instruction on the reduction of mastitis and improvement of milk quality in Florida. Data were collected from 39 dairies that were randomly visited and 35 dairies that received invitational farm visits. Somatic cell count and standard plate count data were also collected from 225 herds in the state who did not receive a visit providing trendline data for the 5 years of the study. Data were analyzed by least squares means and analysis of variance

The major findings of this study were as follows: there was significant reduction in somatic cell count and standard plant count following both types of on-site instruction, with the greatest reduction being in herds receiving an invitational visit; dairies represented at extension meetings on mastitis controls procedures had significantly higher somatic cell counts after the meeting than before the meeting; there was no significant difference in somatic cell counts between herds enrolled in DHIA and those not enrolled; herds utilizing veterinary services had significantly lower somatic cell counts as compared to herds who did not utilize veterinary services; and in comparing the two-way interactions between type of visit and attendance at extension meetings, enrollment in DHIA and the use of veterinary services on somatic cell count and standard plate count, the most significant reduction was associated with an invitational visit. Much work needs to be done in Florida in the area of mastitis control procedures and milking machine maintenance. Only one-half of the herds surveyed had proper coverage of teat dip and 75% of the dairies had malfunctioning pulsators.

Noxel, S.A. (1987). The relationship of supervised occupational experience program scope to student achievement in ornamental horticulture. Master of Science Thesis, University of Florida, Gainesville.

The purpose of this study was to determine the relationship between the scope of supervised occupational experience (SOE), as measured by total Productive Man Work Units (PMWUs), and the

level of achievement in technical knowledge for students who were enrolled in ornamental horticulture in Florida in the 1985-86 school year.

The following research hypothesis directed the study: there is a positive relationship between the scope of an SOE, as measured by PMWUs, and the level of achievement on a multiple choice test designed to measure technical knowledge in ornamental horticulture. Due to the ex-post facto design of the study, six additional variables were hypothesized to be significantly related to student achievement.

The population consisted of public high schools offering ornamental horticulture in Florida. Data were collected from 84 students in a purposive sample off 8 schools. Four instruments were used: a 40-item multiple choice achievement test, a demographic questionnaire, an SOE scope questionnaire and a grade point average form completed by the guidance counselor at each school.

Based on the Pearson correlation analysis SOE scope was significantly related to student achievement in ornamental horticulture. Interest in agriculture, FFA involvement, years previously enrolled and number of teachers were also significantly related to student achievement in ornamental horticulture at the .05 significance level.

Step-wise multiple regression analysis revealed that student interest, number of teachers and SOE scope were significant (p$.05) in accounting for variance in student achievement. No other variables were statistically significant.

Register, J.B. (1987). Attitudes of Florida Future Farmers of America advisors and state vocational agriculture staff regarding the status of twenty-two Florida FFA contests and award programs. Master of Science Thesis, University of Florida, Gainesville.

The central purpose of this study was to determine the attitudes of Florida Future Farmers of America (FFA) advisors and state vocational agriculture staff regarding the status of 22 Florida FFA contests and award programs.

A questionnaire was used to elicit responses from the FFA advisors and state staff regarding their experience in the FFA and vocational agriculture, their satisfaction with the content and management of the 22 contests and award programs, and needed contest improvements along with their satisfaction with the contest's relevance to industry. Further, responses regarding contest retention, the need for Junior Chapter divisions of the

contest and contest participation were collected. The data were then analyzed using frequency and summary statistics, Pearson product moment correlations coefficients and Cramer's V correlation coefficients.

Analysis of the data revealed that the FFA advisors and state staff were satisfied with the content and management of the contests and award programs and agreed that the contests utilize industry related skills. Additionally, the advisors and state staff agreed that all the contests should be retained and that Junior Chapter divisions were needed for the FFA leadership contests. Significant correlations between the FFA advisor's experience as an advisor, his/her previous FFA membership and their satisfaction with the contests and award areas were not found. Numerous contest improvements were suggested by advisors and state staff members and it was recommended that the Florida FFA Executive Committee examine these suggestions for potential implementation.

Summerhill, W.R.; Taylor, C.L.; Israel, G.D.; & Sweat, M. (1987). Respondent Reactions to Selected Aspects of Mail Survey Instruments and Processes. Department of Agricultural and Extension Education, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.

The purpose of this study was to assess the attitudes of people toward mail surveys, and their perceptions of the influence of selected survey features and procedures on their willingness to respond. The study population consisted of 800 residents of a small rural Florida county of were holders of a check cashing card at the major supermarket. A sample of 386 individuals was randomly selected to receive the mail survey. Of these, 97 were returned as non-deliverable. One hundred and twenty-three usable questionnaires were returned (43 percent response). The respondents represented a cross section for age, sex, income, and education.

Findings of the study indicate the large majority of the respondents were either positive or "neutral" toward receiving mail surveys. Only 5 percent indicated "very negative". Almost two thirds of the respondents received two or more surveys per year, with the remainder receiving one or less.

Survey features perceived as having the greatest influence on enhancing respondent's willingness to respond were (1) being provided specific answer categories rather than being asked for a written response, (2) relevance of the survey to the respondent's special situation or interests, (3) the use of short question

statements, and (4) the inclusion of a pre-addressed postage paid return envelope. Features having the least influence on enhancing willingness to respond were (1) the survey being of magazine or book quality, and (2) the survey being booklet form rather than sheets stapled together. Respondents indicated little negative feelings toward being asked their race, sex, or age, some negative felling toward being asked about size of enterprise or practices, and strong negative feelings toward being asked about income. Pre-survey and follow-up thank you/reminder communiques were preceived as encouraging reponse.

Based on the findings of the study, it would appear that attention to maximizing the pertinence of the survey to the respondent and facilitating ease and quickness of response would be particularly warranted in terms of survey design. And, that Extension surveys should only ask for information within the realm of personal attributes, practices implemented, and size of enterprise that is essential, and be quite clear in expressing its importance to the devlopment of programs that will be of benefit to those being asked to respond.

Taylor, C.L.; Summerhill, W.R.; Israel, G.D.; & Ruppert, K.C. Effects of familiarity with sender on response rate of mail questionnaires and their implications for program evaluation. Department of Agricultural and Extension Education, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.

The purpose of this study was to determine the effects of familiarity of sender with the respondents on response rate and speed of return of mail questionnaires and their implications for program evaluation. The effects of familiarity were studied as part of a mail survey to 3,467 citrus producers in Florida. A sample was drawn from two different sampling frames of producers. One was from a list maintained by the local county agricultural agent. The other list was from the Department of Citrus which is an agency of state government. Growers who are on the county agricultural Agent's mailing list are defined as familiar with the sender. Growers who are only on the Department of Citrus mailing list are defined as unfamiliar with the sender.

Findings of this study indicated there was a significant difference in the response rate of those who were considered to be familiar and unfamiliar with the sender of a mail questionnaire. Seventy-six (76) percent of the growers who were familiar with the sender responded to the mail questionnaire. This is compared to 59 percent who were unfamiliar with the sender.

This study indicated that if the sender of a mail questionnaire is familiar to the respondent, return rate will be greater and it will be faster. Seventy-six percent of the producers who were familiar with the sender responded compared to 59 percent who were unfamiliar. Sixty-seven (67) percent of those who responded and who were familiar with the sender returned their questionnaire during the first mailing wave period. This is compared with 57 percent who were unfamiliar with the sender.

Tylke, R.J. (1987). The relationship of supervised occupational experience program scope to student achievement in livestock production. Master of Science Thesis, University of Florida, Gainesville.

The primary purpose of this study was to determine the relationship between the scope of SOE, as measured by total Productive Man Work Units and the level of achievement in technical knowledge for students who were enrolled in livestock production classes in Florida in the 1984-85 school year.

The primary research hypothesis was that there is a positive relationship between the scope of an SOEP as measured by PMWU's and the level of achievement on a multiple choice test designed to measure technical knowledge in livestock production.

Six extraneous variables were thought to have a possible positive relationship to student achievement and formed the basis for alternate rival hypotheses. They were cumulative grade point average, parental encouragement and expectations, years of enrollment, involvement in the Future Farmers of America, interest in agriculture and teacher effectiveness.

The target population consisted of public high school classes of Livestock Production in Florida. Data were collected from 67 students in ten schools in the spring of 1986. Data were analyzed using Pearson product moment correlation coefficients and there was a significant ($p \leq .05$) positive relationship between student achievement and involvement in the FFA and interest in agriculture. The primary independent variable, supervised occupational experience program scope, was not significantly related to student achievement. When data were analyzed by stepwise multiple regression, one variable, interest in agriculture, significantly explained variance in student achievement ($p \leq .05$).

Nash, Roscoe (1985). A study of certain characteristics of in-school students enrolled in classes of vocational agriculture in selected southwest Georgia counties. Education Specialist applied project. The University of Georgia, Athens.

The purpose of the study was to develop a demographic profile of students studying vocational agriculture in certain counties in southwestern Georgia.

Data were collected using an instrument developed in a previous study and revised for use in this study. The instrument was administered to the entire population of 891 vocational agriculture students in twelve high schools.

Selected findings were: (1) Approximately one-third of the students lived on farms. (2) Over 60% of the students had failed at least one course in high school. (3) When analyzed by grade level, the lowest percentage (20%) of students living on farms were seniors. (4) Only about one-half of the students planned to continue their education after high school.

McMann, D.C. (1985). An analysis of adult education in agriculture for northeast Georgia. Education Specialist applied project. The University of Georgia, Athens.

The purpose of the study was to determine certain factors associated with vocational agriculture teachers who conduct adult classes in northeast Georgia. The study also sought to determine the level of satisfaction with the current method of payment for teaching the adult classes.

An instrument was developed and mailed to all current vocational agriculture teachers in Georgia's District III. Data were analyzed using percentages and frequencies.

Major findings for the study were: (1) 90% of the teachers taught adult classes. (2) The teachers rated the adult programs lower in importance than FFA or SOEP. (3) Teachers who taught more adult classes tended to have more active FFA chapters. (4) Teachers were generally satisfied with the pay for teaching adult classes.

Pullen, Dwight J. (1986). Agricultural manpower needs of the Cherokee High School District of Georgia. Education Specialist applied project. The University of Georgia, Athens.

The purpose of the study was to determine future manpower needs of the Cherokee County, Georgia, agricultural community.

An instrument was developed and sent to a random sample of farmers and agribusiness in the county. The sample consisted of 25 farmers and 20 agribusinessmen. All of the sample completed the instrument.

Findings revealed that a total of 205 agricultural employees were "needed now", 860 will be needed "next year, and another 570 will be needed "over the next five years". It was concluded from the study that two vocational agriculture teachers are needed at Cherokee High School to provide instruction to prospective agricultural employees.

Savelle, T.S. (1987). A study of the learning styles of Georgia vocational agriculture teachers. Master of Education thesis. The University of Georgia, Athens.

The purposes of this study were to: (1) investigate the kind and distribution of learning styles among Georgia vocational agriculture teachers, (2) determine the kind and distribution of learning styles among sub-groups of regular classroom vocational agriculture teachers, full-time young farmer teachers, and prospective vocational agriculture teachers, and (3) ascertain the differences between vocational agriculture teachers' learning styles and age as well as between learning style and job tenure.

Learning style questionnaires were mailed or hand distributed to 114 employed and prospective vocational agriculture teachers. A total of 89 instrument were returned. Data were analyzed using frequencies and Chi Square. Findings of the study included: (1) Kolb's "assimilator" was the most common learning style among vocational agriculture teachers. (2) "Diverger" was the least common learning style, (3) No significant differences were determined in the distributions of learning styles among the sub-groups.

Taylor, Wesley L. (1987). The role of high school vocational agriculture programs on the occupational preparation of graduates from Wilkes County Schools. Education Specialist applied project. The University of Georgia, Athens.

The purpose of this study was to determine the role of the vocational agriculture programs in the occupational preparation of graduates from Wilkes County schools.

Data were collected by the use of mailed questionnaire sent to 90 former vocational agriculture graduates from Wilkes County Georgia. Forty two (46.7%) returned the instrument.

The respondents were primarily from rural homes, employed in a non-agricultural jobs or farming, and earned an average income of over $18,000. A majority completed four or five years of vocational agriculture, held the Chapter Farmer degree, and had a supervised occupational experience program which helped them gain job skills. Experiences in vocational agriculture received high ratings from the graduates, and the functions of the program were endorsed by them. Less agreement was found in the guidance areas, but respondents were very supportive of specific program functions. Ninety six percent of the respondents said they would enroll in vocational agriculture again if they had it to do over.

Aman, S. A. (1987). A study of the acceptance of dried fruits and vegetables by the Somali people. Master of Science Technical Paper. University of Idaho, Moscow.

The purpose of this study was to evaluate acceptance of dried food (particularly fruits and vegetables) by the Somali students and their spouses in the United States and Somalis in Somalia.

A questionnaire was used to collect data from 135 Somali students residing in the United States and 75 selected Somalis in Somalia. The questionnaire consisted of 19 questions on attitude and habits toward dried food and 16 questions on general information and personal background. Questionnaires in Somalia were distributed by a Somali student returning to Somali after completing her study in the United States. The Somali students and spouses in the United States were surveyed by friends of the investigator.

The findings of this study found that the Somali people would be willing to accept dried fruits and vegetables. Dried fruits and vegetables would be useful for long term storage, reducing food losses after harvest and in saving time and money. The data also indicated that if the Somali people received the training, they would use solar driers.

Recommendations include: 1) another survey of acceptability of dried fruits and vegetables for school children, producers and consumers in Somalia should be conducted, 2) food preservations and solar drying training courses should be conducted for the extension agents, and 3) a pilot project of food preservation and solar drying should be conducted to train villagers in the procedures and benefits of utilizing solar dried fruits.

Gillman, G. L. (1987). The influence of a vocational exploration class on the opinions and attitudes of the Marsh Valley High School students, as they relate to the vocational education program. Master of Science Technical Paper. University Of Idaho, Moscow.

The Vocational Exploration class at Marsh Valley High School was initiated to provide students with information about vocational programs available to them in the school system. The class had been offered over a period of seven years.

The objectives of this study were: 1) to determine the students' view toward vocational education, 2) identify reasons the students did not enroll in additional vocational education courses, and 3) to determine students' perceptions of the value of the Vocational Exploration Class.

The conclusions of the study indicate that the Vocational Exploration Class has given students a better understanding of what vocational education has to offer. However, there seems to still be a lack of preparation of students in career selection.

Scheduling conflicts are the primary problems students face as they attempt to enroll in a particular vocational program. Students at Marsh Valley High School have a positive attitude toward their vocational education programs available to them. The Vocational Exploration Course allowed students an opportunity to explore a particular vocational program without enrolling for a full year in that particular program.

Harper, E. E. (1987). An assessment of the direction of vocational agriculture/FFA for the future. Master of Science Thesis. University of Idaho, Moscow.

The specific objectives of this study were to: 1) determine employee preparation in selected competencies as indicated by agricultural producers and agribusiness owner/managers of the Treasure Valley, 2) determine the importance of selected general employee characteristics to a Vocational Agriculture/FFA program as indicated by agricultural producers and agribusiness owner/managers of the Treasure Valley, 3) determine the order of importance of instructional areas to the Vocational Agriculture program as indicated by agricultural producers and agribusiness owner/managers of the Treasure Valley, and 4) determine the emphasis to be placed on the Vocational Agriculture/FFA curriculum areas as indicated by agricultural producers and agribusiness owner/managers.

The sample for the study consisted of 100 randomly selected agricultural producers and 151 randomly selected agribusiness owner/managers of the Treasure Valley. Data was collected by way of a mailed questionnaire. Response rate to the instrument was 52 percent.

The average age of the respondents was 49.1 years of age. A majority (51 percent) had attained a baccalaureate degree or postsecondary Vocational-Technical training. Only 39.8 percent of the respondents had participated in Vocational Agriculture/FFA while in high school.

Cooperativeness ranked well above job-know-how as employee preparedness. Integrity (honesty, trustworthiness, and loyalty) was the employee characteristic rating higher than all other characteristics.

The instructional areas of the Vocational Agriculture/FFA program which could be appropriately used by an individual in either an agricultural or nonagricultural career were ranked higher than those areas of instruction that are job-specific.

Based on the findings of this study, the following recommendations were formulated: 1) instruction should emphasize human relations, interpersonal communication skills, and leadership skills, 2) the curriculum should meet the needs of job-entry as well as precollege students, 3) the curriculum should be applicable to all students whether male or female, whether from rural, urban or suburban backgrounds, and 4) the Vocational Agriculture/FFA curriculum should place more emphasis on agribusiness management than agricultural production.

Hjorth, L. W. (1987). Adult agricultural education needs in Franklin County, Idaho. Master of Science Thesis. University of Idaho, Moscow.

The purpose of this study was to identify the educational needs of adult agriculturists in Franklin County, Idaho and to identify the optimum methods of instruction, scheduling of classes and other program organizational matters.

This study was limited to 150 agriculturists of Franklin County. They were surveyed by a mailed questionnaire. Respondents were asked their interest in instructional topics, methods and scheduling for an adult education program in agriculture. The response rate was 72.7 percent.

The results of the study indicated the agriculturist of Franklin County would like an adult education program that provides farm management courses as well as tractor or machinery service and repair, livestock nutrition and feeding, and crop weed control.

The program should be practical short courses or workshops taught in the winter, after the first of the year. The courses should be three hours once a week in the evening, during the middle of the week, preferably Wednesday. The fees should be kept to a reasonable minimum.

The greatest deterrent to participating is regular attendance and not being able to complete the course.

Langley, D. E. (1987). A follow-up of past program participants in the Meridian Vocational Agriculture Program. Master of Science Thesis. University of Idaho, Moscow.

The objectives of this study were to: 1) identify characteristics of former participants in the Meridian Vocational Agriculture/FFA program, 2) identify their occupational status, 3) determine the program's value, 4) determine their perceived benefits of the program, and 5) determine the emphasis selected subject matter areas of the program should have.

The population and sample for the study consisted of former program participants of the Meridian Vocational Agriculture for the years 1976-1986. Data were collected using mailed questionnaires. The study had a 77.2 percent response rate.

Findings of the study indicated that a majority of the program participants completed all four years of Vocational Agriculture classes, were males, and lived on small tracts of land in urban areas. A significant number went on to receive postsecondary training or education. The occupational status of the former participants revealed that most stayed in the area, averaging three jobs, and each had held their current job for a little over three years with a current annual income between $10,000 and $14,999. Over half indicated that all or most of their jobs have been agriculturally-related.

Former program participants were very decisive when evaluating the program's relative worth. They agreed that it is valuable for job entry skills, for continuing education after high school, and for being better prepared for job entry than those without the program. When rating how beneficial the program was in career and life skill areas, respondents rated human and social relations the highest. In addition, most felt the program was helpful in career exploration and postsecondary education. The life skills areas that were rated only slightly helpful were career placement and career advancement.

The program participants were asked to indicate the emphasis to be placed on subject areas within the program based on their experiences. Although respondents indicated that most subjects should be given the same emphasis, about half felt that there should be an increased emphasis in leadership development and agricultural business management.

Lent, K. E. (1987). A study of adult agricultural education programs in the Upper Snake River Valley of Idaho. Master of Science Technical Paper. University Of Idaho, Moscow.

The purpose of this study was to examine the importance of adult agricultural education and agribusiness programs to determine if they should be provided in conjunction with the secondary vocational agriculture programs in the Upper Snake River Valley.

The conclusions derived by the author are as follows: potential adult agriculture students in the Upper Snake River Valley desire a functioning adult farmer program, and adult agricultural education programs can also assist participants in the social as well as educational avenues. The current program - the Farm Bureau Young Farmer and Rancher Program - was not

available to all the potential participants. The secondary vocational agriculture instructors in the Upper Snake River Valley have little or no responsibility for adult education. Funding is not available for adult agricultural education programs through the public education systems in the Upper Snake River Valley.

Based on these conclusions the author recommends that the local secondary vocational agriculture programs and the local FFA chapters begin adult agricultural education programs possibly through some type of FFA Alumni program. As the programs develop and show beneficial results, funding may then be secured on a permanent basis through the local education agencies.

Lierman, S. R. (1987). Elements influencing the change in enrollment of Idaho secondary vocational agriculture programs. Master of Science Thesis. University of Idaho, Moscow.

The primary purpose of this study was to: 1) identify the change in enrollments in Idaho secondary Vocational Agriculture programs from 1979 to 1986, 2) determine the perceptions of Idaho Administrators toward elements influencing Vocational Agriculture program enrollment, 3) determine the perceptions of Vocational Agriculture Instructors toward elements influencing Idaho Vocational Agriculture program enrollment, and 4) determine the differences in the perceptions of Administrators and Vocational Agriculture Instructors toward elements influencing Vocational Agriculture program enrollment.

The population for the study consisted of Administrators from all secondary schools in Idaho that offer Vocational Agriculture and all secondary Vocational Agriculture Instructors having programs during the 1986-1987 academic year. The entire population was used for the study. Data were collected by way of a mailed questionnaire. The response rate was 97 percent for both groups.

Vocational Agriculture enrollment trends from 1979 to 1986 showed extreme fluctuation between Districts. The enrollment data showed that enrollment was the lowest during 1985-86 for all the Districts except North Idaho, which experienced its lowest enrollment in 1986-1987.

Both Administrators and Instructors identified a change in student interest toward agriculture and competition with elective courses as seriously limiting enrollment in Vocational Agriculture. Factors identified as seriously or moderately limiting by a large number of Vocational Agriculture Instructors include: scheduling conflicts, competition with other elective courses, academically oriented students being guided away from Vocational Agriculture, inadequate or inaccurate student knowledge

and/or perceptions of the content and benefits of Vocational Agriculture, and a change in students' interests toward agriculture.

Administrators identified the impoverished status of farming and ranching, the changes in the industry of agriculture, increased graduation requirements, and the recent call "Back-to-the-Basics" as factors decreasing Vocational Agriculture enrollment. The recent call "Back-to-the-Basics", the 90 percent attendance policy, increased graduation requirements, and the impoverished status of farming and ranching were factors identified by Vocational Agriculture Instructors as decreasing their Vocational Agriculture program enrollment.

Pals, D. A. (1987). Benefits of supervised occupational experience programs in Idaho. Idaho Agricultural Experiment Station Staff Study. University of Idaho, Moscow.

The primary purpose of this research was to document the value of supervised occupational experience (SOE) programs as perceived by current and past graduates of Vocational Agriculture programs, parents, Vocational Agriculture instructors and employers. A mailed questionnaire was developed for each group surveyed. A total of 2562 questionnaires were mailed and 1463 returned for a response rate of 57 percent.

SOE programs were viewed by all five respondent groups as valuable in the development of desirable behavioral traits (i.e., Responsibility, Learning on Own, Independence, Self-confidence and Making Decisions) that will be useful to students as they continue through life. The five groups ranked career type activities and Learning to Communicate the lowest of the benefits. Vocational Agriculture instructors tended to rate the benefit items higher than the other four groups; however, all groups rated most of the benefit statements of average benefit or higher. Record Keeping as a benefit was ranked significantly higher by the Vocational Agriculture instructors than by the other four groups.

Based on the findings of this study, the following recommendations were made: 1) Vocational Agriculture instructors, agricultural teacher educators and state supervisors should continue to stress the benefits received from participation in a SOE program, 2) Idaho Vocational Agriculture instructors, teacher educators and state supervisors need to design strategies to increase the participation of Vocational Agriculture students in agribusiness related SOE programs, 3) preservice and inservice education programs should emphasize the importance of involving parents and employers in Vocational Agriculture and the SOE concept, and 4) Vocational Agriculture instructors, teacher

educators and state supervisors need to analyze their record keeping teaching techniques and determine why employers and students rated Record Keeping low as a benefit from SOE programs.

Riesenberg, L. E. and Tesnohlidek-Mosman, C. R. (1987). A follow-up of the graduates of the College of Agriculture at the University of Idaho - 1973 to 1985. Idaho Agricultural Experiment Station Staff Study. University of Idaho, Moscow.

This study sought to determine the graduates perceived quality and value of the College of Agriculture, the number of positions and kinds of employment which the graduates entered, the extent to which former students made use of their education in the College of Agriculture, the extent of occupational mobility among the graduates and information from former students concerning the adequacy of their education in the College of Agriculture.

The population selected for this study consisted of University of Idaho College of Agriculture Bachelor of Science graduates from the years 1973 to 1985. One thousand twenty-two graduates were identified by the University of Idaho Alumni Office. The study had a usable response rate of 79.4 percent.

The study found that 74 percent had attended high school in Idaho, 19 percent were female, 40 percent had been enrolled in high school vocational agriculture, 51 percent had been involved in 4-H, 59 percent secured their first job in Idaho, 75 percent reported their current job as agriculturally related.

Seventy-three percent of the respondents would probably or definitely major in or choose a career in agriculture if they had to choose now, at the time of the survey, however, only 56 percent would encourage their children to do the same.

Over 62 percent reported full-time employment and less than 3 percent reported themselves as unemployed.

Farmers and ranchers constituted over 16 percent of the respondents.

Seventy-seven percent of the respondents indicated that the College of Agriculture was their first choice of all the colleges and universities they had considered.

Over 59 percent of the graduates rated the College of Agriculture faculty as good to excellent in academic advising.

Robinson, P. L. (1986). A vocational agriculture summer program and criteria for credit. Master of Science Professional Paper. University of Idaho, Moscow.

The objectives of this professional paper were to develop a Vocational Agriculture Supervised Occupational Experience Program

for the summer months and the criteria required for students to receive credit toward graduation for participating in the program.

In the past, most summer SOE programs consisted of production enterprises. In recent years there has been a tremendous increase in the number of placement and work experience programs. There has been increased emphasis in Vocational Agriculture to ensure what is taught in the classroom is related to real problems experienced by students and the solutions to those problems be practiced in a real life setting.

The paper describes the organization of the program and how students can fulfill the criteria to receive credit toward graduation for participation. The paper includes a set of sample checksheets of skills and competencies that are currently being used in this exemplary Vocational Agriculture SOE summer program.

Sample, D. A. (1987). A follow-up study of graduates of the Kuna Vocational Agriculture/FFA Program. Master of Science Technical Paper. University of Idaho, Moscow.

Before the future of a Vocational Agriculture Program can be planned and implemented, information concerning the effectiveness of the current program must be gathered.

This study sought to gather the following information: 1) the amount of emphasis and importance that should be placed on different instructional units, 2) the effectiveness of the program in assisting students in choosing careers, 3) the educational benefit of the program as compared to other high school coursework, and 4) the career choices of graduates of the program.

The results of the study indicated that greater emphasis in the curriculum should be placed on the following instructional areas: feeding and nutrition, soil management, crop production, financial statements, computer usage, goal setting, animal health/vet skills, irrigation management, budgeting, obtaining credit, tax planning and planning and implementing SOE programs.

Seventy percent of the respondents indicated the Program provided adequate preparation for career exploration, career placement, career advancement, and post-secondary education. Over 85 percent of the respondents indicated the program provided ample development of human and social relation skills.

The graduates indicated that Vocational Agriculture was more beneficial than other high school courses in preparing them for a wide array of careers.

Over 75 percent of the graduates had received education beyond the high school level. A majority of the graduates had chosen fields of study outside agriculture while 30 percent were employed in non-agriculture related occupations.

Finally, it seemed the Kuna Vocational Agriculture program was offering a practical education capable of preparing students to further their education and/or enter their ultimate career choice regardless if it is agriculturally related or not.

Schmidt. D. W. (1987). The Idaho dairy and dairy products industry - a slide set. Master of Science Creative Component. University Of Idaho, Moscow.

The author developed a slide set (92 slides) with an accompanying script depicting the Idaho dairy and dairy products industry. The slide set was developed as an audio/visual to be used when overviewing the dairy and dairy products industry by vocational agriculture and agricultural extension programs.

The slide set will also be transferred to filmstrip with the script being transferred to an audio tape and into a VHS videotape format.

The final product will be available in the spring of 1988 through the Idaho Vocational Agriculture Teachers Association.

Stastny, A. K. (1986). Merit pay and the Teacher Excellence Program. Master of Science Professional Paper. University of Idaho, Moscow.

After the School Improvement Act was passed by the 1984 Idaho Legislature, educators in the state developed a great interest in the Career Ladder concept. These activities were in reaction to the 1983 report of the National Commission on Excellence in Education.

The author of this professional paper developed the following questions concerning the teacher excellence program: 1) How does a school district participate in the program? 2) What teacher attributes of excellence should be recognized for merit pay? 3) What will be the cost of the program? 4) Who will do the evaluation? 5) Does a merit pay system motivate teachers? 6) Will merit pay attract and keep talented teachers?

The author found that merit pay programs were easily influenced by the politics of education, budget uncertainties, and growing demand for new programs. All of these put new demands on already limited finances. He also found that the merit pay program was one of the more unstable programs of teacher compensation. The author found that merit pay systems caused a competition for the above average student to increase the teachers chance in the career ladder system, stigmatized teachers that did not aspire to or could not fulfill the requirements for the upper rungs of the system.

The author recommends a state wide system be developed independent of individual district differences, develop and define an evaluation system that will be agreeable to all concerned and lastly, set up some type of an appeal system.

Stevens, L. W. (1987). The influence of vocational agriculture instruction in the lives of students; a fifteen year follow-up study of Grace High School vocational agriculture participants. Master of Science Technical Paper. University of Idaho, Moscow.

The objectives of this study were to determine: 1) if employment was related to agriculture, 2) how many completed the total program and the reasons for not completing, 3) what skills, knowledge or values were developed or enhanced, 4) how important postsecondary education was to respondents, 5) what emphasis needed to be placed on curriculum, and 6) was training adequate to secure initial employment. A mailed questionnaire was used and 54 percent of the graduates responded.

The data revealed that almost half of the respondents were working in an agriculture-related job. More than half completed the total program while 52 percent of noncompleters stated scheduling conflicts and increased graduation requirements kept them from completing the total program.

Participants were asked what skills, knowledge or values were developed or enhanced while in the program. Areas cited were: work well with others, make and complete plans, communicate clearly and well with others, use common hand tools, respect rights and property of others, and consciousness of machinery and tool safety.

Postsecondary education was felt necessary by respondents to be competitive in today's world. Most of the respondents had or were completing more education.

Respondents recommended that continued emphasis should be placed on each area of curriculum, but indicated that more exposure to computer work, business law and agriculture business management areas would be useful.

Over 90 percent stated the training received in classes was adequate to secure initial employment.

Recommendations were: 1) make training more like a real job, 2) try to prepare students for several jobs, 3) keep curriculum current, 4) use state of the art equipment and specialists, 5) emphasize fundamentals of finance principles and practices, budgets, career exploration and individualized instruction, and 6) set goals and strive to reach them.

Tesnohlidek-Mosman, C. R. (1987). Graduates' perceptions of the advising in the College of Agriculture at the University of Idaho. Master of Science Thesis. University of Idaho, Moscow.

The primary purpose of this study was to follow-up the Bachelor of Science graduates of the College of Agriculture, University of Idaho from the years 1973 to 1985 to: 1) determine the graduates' perceptions of the quality of the advising they received in the College of Agriculture, and 2) determine if a significant difference existed in the perceived quality of advising received among graduates based on major, gender, relationship of present job to agriculture, and source of assistance in securing first job.

The population for the study consisted of University of Idaho College of Agriculture Bachelor of Science graduates from the years 1973 to 1985. The entire population of 1,022 graduates was used for the study. The data were collected via a mailed questionnaire. The response rate was 79.4 percent.

Respondents were positive in characterizing the undergraduate advising they received from the College of Agriculture Faculty. Overall, advisors were rated Available, Approachable, Knowledgeable, Friendly, Concerned, Straightforward, Reliable, Tolerant, Professional and Organized. Graduates were less positive in their ratings of the Career Counseling, Academic Advising, Career Advising, and Job Placement.

A difference existed in the rating pattern of advising between the graduates grouped by: 1) major, 2) gender, 3) primary employment being agriculturally-related or nonagricultural, and 4) source of assistance in securing their first job after graduation.

Based on the findings of this study, the following recommendations were formulated: 1) the College of Agriculture should provide the faculty with more in-depth advising workshops in an effort to improve the functions of Academic Advising and Career Counseling, as well as the overall advising in the College, 2) the College of Agriculture needs to work more closely with the University Placement Center to help their secure agricultural employment, 3) the College of Agriculture should offer a Career Seminar Course for students to teach such job search skills as developing a resume, filling out job applications, interviewing, and utilizing available job search resources, and 4) the College of Agriculture should compile a comprehensive list of agricultural careers and job openings in agriculture to be used in undergraduate job placement as well as recruitment.

Wilder, S. D. (1987). An assessment of community attitudes toward vocational agriculture/FFA. Master of Science Thesis. University of Idaho, Moscow.

The objectives of this study were to: 1) determine the perceptions of the local community concerning the agriculture system in our future, 2) determine the level of awareness of the Meridian Vocational Agriculture/FFA program, 3) determine the level of awareness of this curriculum in providing career opportunities, 4) determine the program's perceived value, 5) determine the direction the program should follow according to respondents, 6) determine the program's perceived image, and 7) determine the program's perceived value as it relates to the overall Meridian High School curriculum.

The population for the study consisted of current and past students in the program, parents of current and future students, school district staff and patrons. The respondents were randomly selected and data was collected by way of mailed questionnaires. The overall response rate was 68.8 percent.

The data indicated the the respondents were aware of the value of Agriculture to the State of Idaho and were relatively optimistic about its future. Further, it revealed that respondents who had not taken Vocational Agriculture were aware of the program and its community involvement.

The data also indicated that participants believe the agribusiness area is an essential part of the curriculum which will enable students to pursue viable jobs and career opportunities.

The participants reported the areas of Leadership Development, General Employability Skills and Record Keeping as most beneficial.in selecting careers. When respondents were asked to rank the importance of FFA activities to personal growth of a high school student, they identified Participation in Community Service as important followed closely by Competition Through FFA Activities.

A very strong opinion that all students in the district should have the opportunity to enroll in Vocational Agriculture/FFA was reflected by the respondents, who felt that it is an important part of a well-rounded education.

Survey participants were supportive of new high school graduation requirements; however, a plurality of the group indicated that the "new 'C' core curriculum requirement" has an adverse effect on students being able to select elective classes. The respondents were very decisive in their support of allowing Vocational Agriculture classes credit in the curriculum areas of science and humanities.

Wright, J. W. (1987). Buying range bulls: a management decision. A survey of cattlemen in the northwest. Master of Science Technical Paper. University of Idaho, Moscow.

The purpose of this study was to evaluate the needs of cattlemen in the northwest in purchasing range bulls. The sample population consisted of 496 cattlemen in the northwest states of Idaho, Montana, Eastern Washington and eastern Oregon. A total of 360 (73%) of the cattlemen returned the mailed questionnaire.

The questionnaire consisted of nine questions on characteristics of cattlemen and their operations, five questions about bull purchasing and use, three questions concerning yearling bulls and one question on criteria used in selecting bulls for purchasing.

The significant findings of the study included: 1) cattlemen in the northwest are receiving adequate service from the bulls they buy, 2) with 94.8 percent of the cattlemen in the northwest raising their own replacement heifers and 61.6 percent rating expected milk in daughters as being very important, it would seem important that range bulls possess adequate maternal traits, 3) bull buyers in the northwest prefer bulls with medium birth weights from 71 to 85 pounds, 4) phenotypical appraisal (eye appeal) still plays a major role in bull selection, and 5) the EPD and EBV performance programs are recognized as having value to cattlemen in the northwest.

Based on the conclusions of this study, the following recommendation should be considered: 1) another survey of cattlemen in another high cow/calf producing area to compare differences and buying needs of each, 2) retest this survey in 10 years to see if newer criteria for performance and reproduction has gained use and popularity, and 3) purebred breeders should participate in performance programs within their breed registry in order to supply these programs with reliable, accurate and predictable records for use by all.

Lowry, Karen Sue. (1987). Assessing the Educational Training Needs of Volunteer 4-H Leaders in Indiana. Master of Science in Education Thesis, Purdue University, West Lafayette.

4-H is a youth program that operates on the principle of learning by doing which emphasizes the educational value young people derive from applying new knowledge and skills. The success of the 4-H program is dependent upon the leadership and guidance provided by volunteer 4-H leaders. The purpose of this study was to assess the educational training needs of volunteer 4-H leaders in Indiana. A questionnaire was completed by 243 Indiana volunteer 4-H leaders that attended the 1986 Indiana 4-H Leaders Conference.

Results of the study indicate that volunteer 4-H leaders do want and need training. The overwhelming majority of volunteer 4-H leaders were attending the leaders conference in order to improve their leadership abilities and to acquire new activities to implement in their local 4-H clubs. This study also reveals that volunteer 4-H leaders recognize that young people are to learn through their involvement in 4-H, but they do not recognize their responsibility to teach at 4-H club meetings.

Educational activities are tools that volunteer 4-H leaders can use to teach. Results of the study indicate that volunteer 4-H leaders are willing to use educational activities. For each educational activity listed on the questionnaire, volunteer 4-H leaders rated willingness to use an educational activity higher than knowledge about the activity and confidence in its use. Volunteer 4-H leaders have revealed their willingness to use educational activities; therefore, they need to be provided with the skills necessary for them to fully utilize educational activities.

Volunteer 4-H leader training must meet the needs of those leaders receiving it. Extension professionals must provide volunteer 4-H leaders with the tools, ideas, and experiences necessary for the leaders to teach young people, and thus preserve the educational ideals of 4-H.

Paraday, Troy A. (1987). Determining the Monetary Value of Supervised Occupational Experience Programs as Measured by the 1986 and 1987 Hoosier State Farmer/Agribusiness Degree Recipients. Master of Science in Education Thesis, Purdue University, West Lafayette.

The purpose of this study was to determine the monetary value of supervised occupational experience programs as measured

by the Hoosier State Farmer/Agribusiness Degree application. The applications of the 350 Future Farmers of America members that received the Hoosier State Farmer/Agribusiness Degree in 1986 and 1987 were analyzed in this study.

The data indicated a positive gain in the net worth by both Hoosier State Farmer and Hoosier State Agribusiness Degree recipients. Between the years 1981-1986, the 1986 and 1987 Hoosier State Farmer/Agribusiness Degree recipients' combined gross income and expenses were $37,324,212.00 and $31,364,592.00, respectively. Their combined investments in those years were $1,370,115.20.

A significant relationship, at the .05 level, was found between the supervised occupational experience program investments made by 1986 and 1987 Hoosier State Farmer Degree recipients and the number of years in FFA.

Significant relationships, at the .05 level, were found between the supervised occupational experience program incomes made by 1986 and 1987 Hoosier State Agribusiness Degree recipients and the three variables: the number of years in high school; the number of years in vocational agriculture; and the number of years in the FFA. Their supervised occupational experience program expenses and investments also had significant relationships on the variables number of years in vocational agriculture and the number of years in the FFA.

Bruening, T. (1986). An analysis of the use of audiovisual media in young farmer education in Iowa. Masters of Science creative component. Iowa State University, Ames.

The overall purpose of the project was to develop and evaluate an instructional tool that could be used to help explain the various activities of the state young farmers association to potential members of the Iowa Young Farmers Educational Association, sponsors, agribusinesses and other interested individuals. A videotape was developed to provide a visual message depicting current young farmer educational programs and activities. The project contained an evaluation component which was used to determine the effectiveness of the product that was developed. The evaluation was performed by members of existing chapters and vocational agriculture instructors throughout the state. The objectives of the project were achieved by conducting three major project phases - producing and filming the videotape, sequencing and editing the videotape and viewing and evaluating the videotape. Over one hundred twenty minutes of activities were filmed. An eighteen minute videotape was produced from this filming.

A thirty-three item evaluation instrument was developed, and field tested. This instrument was completed by 56 young farmers and 157 vocational agriculture instructors. Based on the objectives of the project and findings drawn from the evaluation instrument the following conclusions were made: the videotape has potential as a tool for membership development; transferring information via videotape is a viable alternative; young farmers and vocational agriculture teachers expressed an interest in receiving more information about young farmer chapters; the emphasis in this videotape was on education, leadership and community development, young farmer programs and activities. The most significant finding in this study was that video technology is most effective when group discussion is infused into the program by a facilitator.

Burton, L. D. A comparison of vocational agriculture teacher behaviors and characteristics. Doctoral Dissertation. Iowa State University, Ames.

The purpose of this study was to assess teaching behaviors and demographic variables associated with teachers and learning. The population studied consisted of 10,200 secondary vocational agriculture teachers from throughout the United States. A

stratified random sampling procedure was used in conjunction with an oversampling technique combined with a substitution procedure. Two mailings resulted in a response rate of 58.0% and a sample size of 494 teachers. A follow-up procedure was initiated with nonrespondents, and no differences were found among mean responses from the primary respondents, substitute respondents, and the nonrespondents.

The data were gathered using a descriptive survey instrument designed to assess the extent to which vocational agriculture teachers use research-based teaching effectiveness techniques in their teaching activities. It also addressed demographic characteristics of the teacher. The instrument was validated by vocational agriculture instructors, and reliability of the survey instrument was calculated to be .86.

Two distinct groups of teachers were identified using composite scores from teacher responses to the forty statements on teaching activities. These two teacher groups were used in making comparison among the demographic variables.

Several significant demographic characteristics of teachers of vocational agriculture were identified which were good discriminators between the high and low teaching effectiveness levels. Effective teachers tended to teach more secondary and adult students, and had been in their present schools longers than had less effective teachers. They were older teachers and were inclined to join more professional and community organizations. They were more frequently found in higher levels of leadership within organizations. They were more frequently found in higher levels of leadership within organizations. They were more frequently appointed to government commissions than was true of less effective teachers, and they relied heavily on university-related personnel and services for technical information. Other information sources which were most frequently named included local professionals, media, supervisory personnel, and other vocational agriculture teachers.

Elliot, A. C. (1987). Attitudes of farmer users toward on-line agricultural information services. Masters of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine how farmers are using on-line agricultural information services, and to examine their preferences and perceived needs in relation to these services in order to make recommendations which will be useful in the planning or improvement of such systems.

Questionnaires were mailed to 108 farmers chosen at random from all the farmer users of AgriData Network in Iowa, Nebraska, Minnesota, Missouri, Indiana, Illinois, and Ohio. Fifty-six questionnaires were returned in sufficiently complete form for analysis (a return rate of 51.85 per cent).

The findings of the study had implications for agricultural educators and extension workers interested in tailoring their programs to meet the needs of their students or clients. They included: (1) The main reason for deciding to subscribe to an on-line agricultural information service was to get up to date information for marketing and decision making; (2) The limitation to use rated most important was cost; (3) Agricultural magazines were the most frequently mentioned first source of information about on-line agricultural information services and the most frequently mentioned source for helping farmers decide whether to use the service, and the Extension service was among the least mentioned for both these purposes; (4) The on-line service was used most by farmers to obtain market information, but was not heavily used to obtain agricultural news, agricultural production information, and farm and business management information; (5) Characteristics of on-line agricultural information services rated as most important were commodity future market prices, commodity cash prices, and commodity reports.

Leibold, Kelvin L. (1987). Profile of students entering the College of Agriculture at Iowa State University, Fall semester, 1985. Master of Science Thesis, Iowa State University, Ames.

The primary purpose of this study was to profile students entering the Colleges of Agriculture and Sciences and Humanities during the 1985 Fall semester. Demographic information, factors influencing curriculum choice, and attitudes towards agriculture were examined.

A questionnaire used in a similar study conducted in 1980 was reviewed and modified by faculty members in the Agricultural Education Department, the Associate and Assistant Deans in the College of Agriculture, and advisors in the Sciences and Humanities College. Data were collected in orientation classes from a total of 872 students, 417 enrolled in the College of Agriculture and 455 enrolled in the College of Sciences and Humanities.

Findings of the study included: (1) Entering agricultural students are largely Iowa males from farms or rural acreages who actively participated a wide range of school and community activities; (2) About seventy percent of the students who had an opportunity to enroll in vocational agriculture did so; (3)

Parents had the greatest influence on the student's decision to attend Iowa State and in selecting a major followed by vocational agriculture instructors for those students who had taken the program; (4) The percent of transfer students entering the College has nearly doubled since 1980 although the actual number has remained stable; (5) Job security, prestige, and parent's views toward the choice were important factors in the student's decision when selecting a career; (6) Almost half of the students indicated that their parents encouraged them to enter an occupation different than their own; (7) Farm-reared students enrolled in the College of Sciences and Humanities indicated that their parents had encouraged them to enter a different occupation to a greater degree and they felt that the current farm situation had a greater effect on their occupational choice than did College of Agriculture students.

Martin, R. A. & Omer, M. (1987). Perceptions regarding instructional methods used in adult education programs in Iowa. Staff Study. Iowa State University, Ames.

The main purpose of this study was to determine and analyze perspectives on the use of various instructional strategies used in adult education. The critical issues that required attention centered around identifying the most effective instructional methods and tools and the extent to which these methods and tools were used.

Data were collected from two sub-population groups: Extension professionals and post-secondary vocational-technical agriculture instructors in Iowa. Fifty respondents were randomly selected from each group. A total of 80 individuals participated in the study by completing a mailed questionnaire. Judging by the respondents' perceptions, the findings indicated that instructors put a high value on using a variety of instructional methods. However, the respondents indicated that, in terms of use, the lecture discussion method was the predominate instructional strategy. The respondents indicated that the following instructional tools were predominately used: overhead projector and slide projector.

The following list of strategies and tools were rated highly by the respondents in terms of effectiveness: video-tape programs, questionning, group discussions, chalkboard, slide programs, overhead projections, individualized instruction, problem solving, and lecture discussion.

The results of this study suggest that adult educators believe that a variety of instructional methods and technologies should be used and that a number of these strategies and tools are

effective. However, many adult educators may not feel fully equipped to use all the technologies and strategies even though educators believe them to be effective.

Martin, R. A.; Omer, M.; & Bia, Johnson. (1987). Attitudes and perceptions regarding adult agricultural education programs in Iowa. Staff Study. Iowa State University, Ames.

The purpose of this study was to identify the attitudes and perceptions regarding adult agricultural education programs in Iowa. Data were collected by self-administered mailed questionnaires, sent to a randomly selected group of young farmers, agribusiness persons, vocational agriculture teachers, postsecondary agriculture instructors and Extension professionals. One hundred thirty-eight respondents indicated the extent to which they agreed or disagreed with 88 statements related to adult agricultural education programs. Biographical information was also included in the questionnaire. Data were analyzed using means, standard deviations, frequencies, percentages and one-way analysis of variance.

The respondents indicated that adult agricultural education programs are worthwhile and important to those who participate. The respondents indicated that programs should provide technical information, develop practical skills, include an application component and meet expressed needs and interests of the participants. The study left no doubt that business management should be the focus of educational programs and this focus should be a part of all educational programs that seek to transfer technology. The respondents also indicated that participants in educational programs should help evaluate them.

Vocational Agriculture teachers indicated that adult education in agriculture had a poor image and that other agencies might be better equipped to offer technical updating to potential participants than vocational agriculture teachers. Extension professionals indicated that state universities have a key role to play in adult agricultural education.

The most significant finding in this study focused on the general consensus among the respondents that Extension professionals, vocational agriculture teachers and postsecondary agriculture instructors should cooperate in providing adult agricultural education programs to farmers in Iowa.

Miller, Zen W. (1986). Leadership and personal development as perceived by students enrolled in selected Iowa high schools. Master of Science Thesis, Iowa State University, Ames.

The primary purposes of the study were to assess the students' perceptions of their leadership and personal development, and to establish student baseline levels for ten leadership and personal development scales.

The population for this study consisted of high school students in three central Iowa towns in the fall of 1985. The schools were selected at test sites based on size, location, and the existence of vocational agriculture programs. A total of 1622 students were surveyed at the three schools. An instrument developed in an early Iowa State University Agriculture Experiment Station project was used to measure group achievement, attitude toward group work, personal development, and demographic information.

Findings of the study included: (1) More students have served as officers than have served as committee chairs; (2) Less than 70% of the officers have received formal leadership training; (3) The larger the school, the fewer organizations students join; (4) Mean scores reported on a 7-point scale for the ten scale scores ranged from 4.85 for drive to 5.82 for cooperation; (5) Students who have served as officers or committee chairs had significantly higher mean scores on all ten scales than did those students without those experiences; (6) Students who have received formal leadership training had significantly higher mean scores than those without formal training for the scales of leadership, drive, cohesiveness, and achievement.

Odubiyi, A. O. (1987). Perceptions of Iowa vocational agricultural teachers regarding methods used in agricultural education. Master of Science Thesis. Iowa State University, Ames.

The purpose of this study was to seek perceptions of practicing vocational agricultural teachers in the state of Iowa, regarding the various teaching methods used in their day to day teaching activities. Specifically, the study sought to determine the extent to which various teaching methods, tools and techniques were used and were considered effective. The study also sought to compare these findings with selected teacher characteristics.

A self-administered mail questionnaire was used in collecting the data. A five point Likert type rating scale was used for the first two sections: perceptions about teaching/learning concepts; use and effectiveness of selected teaching methods/tools.

Biographical information was collected as well as general comments on teaching. The population of the study consisted of the 268 teachers of vocational agriculture in Iowa. Twenty-five teachers were randomly selected from each of the 6 districts of Iowa to allow for comparisons of their perceptions on the use of instructional methods. One-hundred-nine teachers responded to the questionnaire.

The findings in this study indicate that vocational agriculture teachers in Iowa believe that a variety of instructional methods should be used in teaching; individualized instruction should be used to help learners solve problems; teachers should use decision making situations in the instructional plan; lecture discussion was a frequently used technique which was considered effective; demonstration methods were considered effective; individualized instruction was considered to be effective. One of the major findings in this study indicates that teachers of agriculture recognize that individual differences exist among students, but it is a challenge to meet these differences when several students have special needs, ie. learning disabilities. Teachers were also uncertain about involving students in preparing instructional learning materials, ie. bulletin boards, displays. There were no differences between the respondents when comparisons were made on the basis of groups from the six districts of the state of Iowa. Based on the comments of the teachers the following methods/tools were most useful in classroom instruction: lecture, discussion, problem solving, demonstration, textbooks, magazines, study guides, visual aids, transparencies, videotapes, and computers. Although teachers encourage the use of a variety of teaching methods/tools, one of the major concerns of teachers was the lack of time to adequately plan for the utilization of a variety of methods.

Omer, M. H. (1987). Analysis of selected factors associated with participation of Iowa young farmers in agricultural extension programs. Doctor of Philosophy, Iowa State University, Ames.

The primary purpose of this study was to determine and analyze selected factors associated with awareness and participation of young farmers in agricultural extension activities. A secondary purpose of the study was to determine perceptions held by young farmers regarding various agricultural programs offered by the Cooperative Extension Service (CES). The study revealed information regarding the characteristics, types of contact and participation in agricultural extension activities, and needs of Iowa young farmers.

The population of the study was the membership (400) of the Iowa Young Farmers Educational Association (IYFEA). A total of 102 members of IYFEA participated in the study by completing a questionnaire. A survey instrument was developed by the researcher and used to collect the data. A five-point Likert scale was used for the first part of the questionnaire. Descriptive statistical procedures of the subprogram for Statistical Package for Social Science was used to analyze and summarize the data. The reliability of the survey instrument was tested and an alpha score of .94 was obtained for the entire instrument on the following scales: importance of planning, program areas and extension methods.

The major findings of the study were: (1) the majority of the respondents had participated in meetings sponsored by the CES, (2) nearly three-fourths of the respondents indicated that they were satisfied or very satisfied with services/information provided by CES, (3) the highest rated extension educational methods included conducting local community meetings, disseminating information via newspapers, and conducting county meetings.

The results of this study suggested that the CES should increase the involvement of young farmers in planning and conducting educational programs. More emphasis should be placed on the educational topics with the highest priority such as marketing, financial planning, and production management.

Quinlan, D. J. (196). An evaluation of on-farm microcomputer used in Tama county, Iowa. Master of Science Thesis. Iowa State University, Ames.

This study focused on determining the perceptions of farm operations owning microcomputers and how these farm operators used microcomputers as management tools. Results indicated that farmers participating in this study agreed that the microcomputer was a valuable management tool, but they did not feel they were using the microcomputer to its maximum potential.

Micro-computer software programs on farm records, word processing, and multiple use spread sheets were the three most popular programs rated by the respondents. Educational programs respondents would like to see offered included farm record keeping, cash flow statements and farm accounting.

One of the main findings in the study indicated that the primary reason these farm operators purchased a microcomputer was to improve their financial analysis and record keeping ability. Consequently, they feel there is a great need for agriculturally-oriented micro-computer educational courses.

The major conclusions of this study implied that, although it has been widely accepted that the adoption of on-farm microcomputer technology would be very rapid in comparison with adoption of other technology in this century, it appears that this is not yet the case. The use of microcomputers in farming operations has not been as rapid as the adoption of farm mechanization and electrification. While many farm operators are purchasing microcomputers, they may not be adopting the technology to assist in the function of the farm operation to the extent that had been hoped.

It was recommended that farm financial management instruction should contain a microcomputer records component.

Data were collected through mailed questionnaires sent to 164 farm operators in Tama County, Iowa, who owned a microcomputer and produced at least $5,000 in gross agricultural receipts from their farming enterprises.

Schumacher, L. G. Attitudes and perceptions of selected educators, administrators and legislators toward agriculture. Doctoral Dissertation. Iowa State University, Ames.

The purpose of the investigation was to determine the attitudes and perceptions of selected Iowa educators, administrators and legislators toward agriculture. Specific objectives were to determine: 1) their perceptions toward agriculture, 2) their attitudes toward agriculture, the 30 demographic factors associated with their attitudes and perceptions expressed toward agriculture, and 4) differences between their attitudes and perceptions expressed when grouped by associated demographic characteristics.

A survey instrument was mailed to teachers, school board presidents, school administrators, and state legislators. Simple random sampling and stratified random sampling were employed for the investigation.

Cronbach's alpha was calculated for the scaled items of the survey instrument and for the ten perception factors and six attitude factors identified through factor analysis.

Respondents were most knowledgeable about the usage of agricultural chemicals and agricultural mechanization in Iowa. The respondents were observed to be less knowledgeable about agriculture as a way of life, current agricultural economic conditions and new agricultural technology. The only factor that the legislator group appeared more knowledgeable was of agricultural economic conditions.

It was observed that the industry of agriculture was more important to the respondents than the other attitude factors and that if the respondent's perception of an issue was higher, the respondents placed less importance on the corresponding issue.

The research concluded that: 1) several events in the respondents' lifetime influenced their perception and attitude toward agriculture; 2) respondents with past agricultural involvement, being raised or having lived in a region of the state more directly involved with agriculture, were more knowledgeable about agriculture and placed more importance on agriculture; and 4) legislators were least knowledgeable and placed less importance on agriculture than any of the other respondent groups.

Shafiq, M. (1986). A follow-up study of agricultural education graduates at the University of Agriculture, Faisalabad. Ph.D. Thesis, Iowa State University, Ames.

The purpose of this study was to conduct a follow-up of the graduates of the Department of Agricultural Education at the University of Agriculture, Faisalabad, Pakistan. A total of 208 students were graduated from the program and 148 of them were accessible. A mailed questionnaire was designed for data collection. The data collected from 110 respondents were analyzed using descriptive statistics, crosstabs and analysis of variance.

Findings of the study included: (1) only nine percent of the graduates were in the teaching profession at the time of the study, 11 percent had entered teaching and then left, and 80 percent never taught; (2) farm family background and marital status were not significantly associated with teaching experience; (3) the most influential factor on the respondents decision to enter and leave the teaching profession was inadequate promotional opportunities; (4) the most influential factor on the respondents decision not to teach was inadequate salary, while the most influential factor on the respondents decision to remain in the teaching profession was getting students to learn materials; (5) forty percent of the respondents felt that the overall preparation for their present job was good or very good, and 47.6 percent felt it was average.

Tibbits, T. J. Teacher attitudes towards agribusiness management and computer data bases in Iowa vocational agriculture programs. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine the attitude of Iowa vocational agriculture instructors towards computerized data bases and agribusiness management programs. Microcomputers-assisted instructional materials including documentation were prepared in the form of data base management programs.

The study was designed to assess the attitude of instructors towards data bases and agribusiness management instruction in Iowa vocational agriculture programs. Those areas tested were data base usage in vocational agriculture programs, teacher attitudes towards the potential use of data base management in vocational agriculture, and attitudes towards data base management in agribusiness instruction.

A relationship, or correlation study design was used. Pre-workshop and post-workshop surveys were used to collect the data used to determine the relationships.

Data analysis centered on meeting the objectives identified for this study. Because this study utilized a self-selected sample, the findings and conclusions of this study cannot be generalized to the entire population of Iowa vocational agriculture instructors.

The mean hours of microcomputer use in the past year was 148.7 hours. The mean hours of CAI use was also substantially higher than that of past microcomputer workshops. The instructors had been teaching for a mean of 8.7 years. The instructors indicated that nearly 70 percent of their class time was spent on the traditional areas of animal science, crop production, agricultural mechanics, farm management, and FFA. Instructors indicated that the most important topics in an agribusiness management curriculum should deal with decision making and managing a business. Sixty-two of the 76 instructors indicated that they had access to a data base management program. While instructors' use of data bases increased, their attitudes towards the potential use of data bases in vocational agriculture programs decreased. Instructors placed a high value on agribusiness education as part of the vocational agriculture curriculum. Instructors agreed that data base management programs have a role in teaching agribusiness management. Instructors ranked skill development and employability as important factors in implementing agribusiness education.

Ubadigbo, F. N. (1987). Educational strategies used by selected agribusinesses in disseminating product related information to clients. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to explore the educational strategies used by three selected types of Iowa agribusinesses: livestock feed, chemical/fertilizer, and seed. Eight-four agribusinesses were mailed a questionnaire and 63.29 percent responded.

The findings indicated that the three types of agribusinesses studied employed a variety of dissemination strategies to provide information to their clients. Farm (home) visits, meetings, farmers dropping in at business office, and newsletters were prominent among the strategies used. Mean scores on topics in their educational programs were generally high. Limited cooperation existed between agribusinesses in Iowa and other educational agencies except for private individuals, the Cooperative Extension Service, and Vocational Agriculture--FFA programs. The importance of supplying up-to-date information on selected agricultural programs to agriculture teachers was upheld by the agribusinesses in the study.

More cooperation is needed between agribusiness industries and agricultural educators. Educators need to involve agribusinesses in their program planning in order to incorporate agribusiness ideas into the educational programs.

Ware, Connie M. (1987). Teaching critical thinking as perceived by Iowa vocational agriculture instructors. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine vocational agriculture instructors' attitude toward critical thinking and their perceptions of using critical thinking techniques in teaching classes in vocational agriculture. Data collected were obtained by use of mailed questionnaires sent to 130 randomly selected vocational agriculture instructors in the State of Iowa. Respondents were asked critical thinking concepts in the teaching, learning, and achievement-assessment process.

The study indicated that vocational agriculture teachers believe developing critical thinking in their students was important. They indicated that the most important factors among the student-learning activities studied were: 1) learning to make decisions, 2) solving problems, 3) applying facts and principles, 4) interpreting factual information, and 5) recognizing relevant information.

Findings from this study indicated that critical thinking is needed in vocational agriculture programs and in other programs in the public school curriculum. Students need to be taught how to think critically, objectively, and analytically in order to handle real-life situations and problems. In order to develop critical thinking, programs must be instituted to assist teachers in meeting these needs of students.

Moore, G. E. (1987). A historical analysis of doctoral research in agricultural education. Staff study, Louisiana State University, Baton Rouge.

The purpose of the study was to determine if there was a focus to doctoral research in agricultural education between 1900 and 1986; and if there was a focus, was the focus on the problems of the profession.

A computerized and hand search of Dissertation Abstracts International was conducted. Nine hundred and seventy dissertations in agricultural education were found. The data were placed in a computerized data base (Dbase III) and various combinations of data were retrieved for examination.

The first dissertation was written in 1906. The number of dissertations written by decade were Pre-1930 - 33, 1930 - 48, 1940 - 29, 1950 - 156, 1960 - 177, 1970 - 255, 1980-86 - 272. The early dissertations were on organization, administration, curriculum development, and teacher training. Current dissertations are focusing on extension and international activities.

In general, the problems being researched did coincide with the concerns of the profession. However, the dissertations tended to be after the fact. Dissertations generally were not forward looking.

Moss, J. W. (1986). Identification of science-related competencies taught in vocational agriculture programs in Louisiana. State Department of Education funded study, Louisiana State University, Baton Rouge.

The purpose of the study was to determine the extent to which science-related instruction occurs as a part of instruction in vocational agriculture. Specific objectives were as follows: (1) To identify instructional objectives in the Basic Program of Vocational Agriculture in Louisiana which were similar to competencies taught in state-approved science courses; and (2) To determine the amount of time spent in vocational agriculture programs in Louisiana on science-related vocational agriculture instruction.

Two groups of knowledgeable personnel assisted in the identification of the science-related objectives. Input from a random sample of Louisiana vocational agriculture teachers was sought to determine science-related instructional objectives and time spent on science-related instruction. A select sample of 15

Louisiana science teachers were asked to verify the appropriateness of the objectives identified as science-related by the vocational agriculture teachers.

A survey instrument was developed, validated, field tested, and sent to the sample of vocational agriculture teachers. The teachers were asked to determine if the listed objectives were science-related and to indicate the amount of time spent teaching the objectives. After the instructional objectives were identified, a second instrument showing the relationship between the agricultural objectives and science competencies was sent to the sample of high school science teachers for validation of the similarity of the objectives.

A total of 76 instructional objectives from the Basic Program of Vocational Agriculture in Louisiana curriculum guide were identified as being science related. The greatest similarity between the curricula in vocational agriculture and a specific high school science course is in environmental science. Fifty-four agricultural objectives were of similar content to the objectives taught in environmental sciences. It was also found that 20 of the 76 objectives overlapped with two or more science courses. For example, the objective "label and define essential parts of the digestive system" is taught in both biology and general science.

Overall, the teachers reported that approximately one-third of the instructional time spent in teaching vocational agriculture in Louisiana is spent on science-related instruction.

MARYLAND

Good, N. K. (1987). A follow-up of University of Maryland Eastern Shore agriculture education and general agriculture graduates from 1970 to 1985. Master of Science Thesis, The University of Maryland Eastern Shore, Princess Anne.

The purpose of the study was to determine how former Agriculture students perceived the education they received at UMES. The sample was fifty-nine alumni who graduated between the years of 1970 and 1985. The instrument used to collect data was a mailed questionnaire. The data was analyzed, using the SPSS-X Statistical Package for Social Scientists.

The data suggested that several aspects of UMES could have or should have been improved. The findings indicated that former students felt that the strongest aspect of UMES was the student-teacher ratio. The findings also indicated that the alumni felt that the University administration and out-of-date facilities were the weakest aspects of UMES. The respondents also listed curriculum changes that they perceived should have been made.

Lepp, B.N. (1986). An assessment of the informational needs of the small flock owners in Maryland through surveys of County Extension Agents and feed dealers. Master of Science Thesis, The University of Maryland Eastern Shore, Princess Anne.

The purpose of this study was to assess the informational needs of the small poultry flock owners in Maryland. Through surveys of the County Extension Agents and the feed dealers in Maryland, flock populations, their distribution and problems were identified. Due to the large number and diversity of small flock owners a direct survey was not possible. To overcome this problem two surveys were conducted of affiliated populations in order to assess the informational needs of the small flock owners of Maryland. These surveys had a usable response rate of 91% for County Extension Agents and 33% for feed dealers. The combined results from samples of 21 agents and 143 feed dealers determined that feed dealers, County Extension Agents and neighbors were the three most frequently used sources of information on flock management for small flock owners. The questions most frequently asked by flock owners were concerned with: disease control and flock health, management practices, feeding and nutrition, housing management, and sources of disease-free chicks. These results were compared with archival data from other studies and poultry workshops. The results and the archival data support the theory that small flock owners in Maryland have educational and small flock managerial needs that are not being met. It was concluded

that the educational needs of the small flock owners could be met by conducting workshops that include general flock management, disease prevention and control and nutrition. Workshops should be initially planned for the counties surrounding the Baltimore/ Washington metropolitan areas. It was indicated that flock owners in these counties would be willing to travel to workshops and these counties hold the greatest concentration of small flocks. It was recommended that a poultry vaccine purchase program be set up and made available to flock owners to protect their flocks and their neighbors' flocks.

Magaji, A. A. (1986). Development of an effective agricultural extension for the delivery of current information to farmers in Nigeria. Master of Science Thesis, The Unviersity of Maryland Eastern Shore, Princess Anne.

The purpose of the study is to develop an effective agricultural extension program for effective delivery of information to farmers. An effective delivery system will help to eliminate some of the farmers problems by keeping them up to date with the current farming techniques to increase their agricultural output and raising their standard of living. Cooperative agriculture extension work consists of giving instruction and practical demontrations in agriculture and home economics and other related subjects to persons having little or no agricultural knowledge, and impart information on the said subjects through farm demonstrations and publications. Survey questionnaires were sent to one hundred and eighty farmers randomly selected from the eastern shore of Maryland.

Results of the study indicated that extension work should focus on program development and implementation. The program can only be effective if the program reaches the appropriate people.

The results provided evidence of the importance of educating farmers to improve their position on their farms. Through the adoption of improved management practices, by the distribution of bulletins, news releases and contact with county agent the farmers can improve their production and financial situation.

Warren, W. I. (1986). The feasibility of a swine testing station at the University of Maryland Eastern Shore. Master of Science Thesis, The Unviersity of Maryland Eastern Shore, Princess Anne.

This study investigated the need for a swine testing sta-

tion at the University of Maryland Eastern Shore by swine producers of the lower Eastern Shore of Maryland and Virginia. The sample consisted of 56 producers from Dorchester, Somerset, Wicomico, and Worcester counties of Maryland, and Accomac County in Virginia. These data were collected by the use of mail questionnaire. These data were analyzed by the use of the Bio Medical Computer Program.

The findings from the study indicated a high interest although having a low response rate. Much interest was also shown in the development of a genetic improvement course for lower shore swine producers.

Njoku, A.N. and Longest, J.W. (1987). Organizational Communication As Perceived By Maryland Cooperative Extension Service State Specialists. Doctoral Dissertation, The University of Maryland, College Park.

The purpose of this study was to measure the perception of communication in Maryland Cooperative Extension Service (MCES) by the state specialists. The study used Grunig's situational theory to measure the specialist's perception in the areas of: organizational structure, problem recognition, constraint recognition, level of involvement, information seeking, and information processing.

Through the use of a mail questionnaire, 130 state specialists were surveyed, with a response rate of 83.07%. The instrument used was adapted from a "Communication Survey" developed by Dr. Grunig.

Data were analyzed by using descriptive statistics, Pearson's product-moment correlations, factor analysis, and multiple regression.

Analysis of communication channels and networks showed that specialists frequently used memos and letters, the state extension service newsletter, and the news media. They also made frequent contact with colleagues in extension, department chairperson, extension agents, extension clientele, and the grapevine. They had limited contacts with extension directors.

Analysis of organizational structure revealed that specialists viewed MCES as highly formalized, relatively centralized, and moderately complex.

Pearson correlations supported the hypothesis that the greater the degree of centralization, the lower the rate of information seeking and information processing. However, Pearson correlations did not support the hypothesis that the greater the degree of formalization, the lower the degree of information seeking and information processing.

No correlation was found to support the hypothesis that the greater the degree of complexity, the higher the rate of information seeking and information processing. Scores measuring the direction of communication in the organization revealed that specialists perceived the organization to be rather one-way symmetic, but not extremely so.

Overall, specialists perceived high problem recognition about national-state policies. They felt constrained about the same issues, and therefore, felt less involved in matters regarding those issues. On the other hand, they felt highly involved in matters concerning their immediate jobs or future plans.

Walls, R.S., Jr. and Cooper, E.L. (1987). A Computerized Financial Accounting System for the Maryland FFA Association. Non-thesis Study, The University of Maryland, College Park.

The purpose of the study was to examine the financial accounting needs of the Maryland Association of FFA and setup computerized procedures for keeping records, reconciling deposits and expenditures and generating activity budgets and financial reports as needed. The study was needed to convert the traditional ledger system to a computerized system with greater speed, flexibility, accuracy and adaptability. Another important need was to develop an inservice manual for staff to learn and use the system once it was operationalized.

The study consisted of an analysis of the current accounting procedures and future needs by a jury of experts consisting of present and past State FFA Advisors and the current FFA Executive Secretary. Numerous computer books, journal articles and individual sources were consulted to determine the appropriate commercial computer software that would provide the structure and generate the appropriate documents and reports needed by the Maryland Association of FFA. Then the procedures were developed and a manual written to describe the system.

The Apple II system with 512K memory and Imagewriter printer was selected because of its availability, ease of use, and familiarity to accommodate the variety of special reports that must be generated for the donor groups and the clinetele of the FFA. Appleworks by the Apple Computer Company was found to be the most suitable software package.

All procedures were developed and the system was operationalized. Step-by-step instructions were written to enter transactions and generate all reports needed. Examples of reports are 1) items cleared, 2) items outstanding, 3) Maryland Agricultural Fair Board Report, 4) IRS Report and 5) general ledger. A glossary of acronyms is provided.

It was concluded that an integrated software package such as Appleworks, with word processing, data base and spreadsheet applications was the best software for the job. Further, it was concluded that 1) the computerized system could be learned with a resonable amount of inservice, 2) the accuracy and flexibility provided by the computer was a great improvement over the old system and 3) the search should be continued for integrated software that performs computations like financial management packages which will meet the expanding accounting needs of the Maryland Association of FFA.

MICHIGAN

Doyle, Michael V., & Davis, Daniel T. (1987). Report of findings, cooperative extension service job opinion study, Michigan State University. Michigan State University, East Lansing, Michigan.

The purpose of this study was to collect and analyze data from a Cooperative Extension Service job opinion study conducted in early 1987. Specifically, the following tasks were performed: (1) collected and stored completed questionnaires as they were returned by survey respondents; (2) produced a codebook for coding the questionnaires; (3) coded all questionnaires and performed the required data entry procedures; (4) performed the appropriate statistical analyses of the data; and (5) prepared a report of the findings.

Findings of the study included: (1) Roughly 32% of the respondents were between the age of 30 and 39, and another 31% were between 40-49; (2) Fifty-seven percent (57%) were male; (3) Nearly 43% were involved in the Agriculture/Marketing program area, while the Natural Resources/Public Policy area was the smallest with seven percent; (4) A vast majority (over 81%) indicated their race to be "Other" (including Caucasians), while there were slightly more Native Americans than Blacks; (5) The majority of the respondents (55.7%) held a master's degree; and (6) Over 92% said that their responsibilities challenged their abilities.

Doyle, Michael V., & Davis, Daniel T. (1987). An analysis of 1987 Ag Expo participants. Michigan State University, East Lansing, Michigan.

In 1983, Ag Expo coordinators commissioned a study to learn more about the farmers who participated in this event. This data was to be provided to displayers to help them justify the expense of exhibiting equipment at the show. Specifically, the study was designed to provide administrators with information about the commodities these farmers produced, the size of their operations and their locations, whether they were full-time or part-time farmers, their reasons for attending Ag Expo, their recent purchases and their purchase intentions for a five year period. This 1987 survey was conducted to compare the results with that of the earlier survey.

Findings of the study show: (1) The Ag Expo audience continues to be an exclusive, localized group; (2) The major reasons for attending was on equipment-related needs; (3) Participants were purchasing less field equipment, buildings and

other equipment than they were in 1983; and (4) Their primary source of information, for both Ag Expo and farming practices, was farm magazines.

Jones, Isabel A. (1987). Some trends in the development of entrepreneurship in the United States and the role of the cooperative extension service in entrepreneurial education. Doctoral Dissertation. Michigan State University, East Lansing.

The general purposes of this study were: (1) explore trends in entrepreneurial development; (2) ascertain the development of entrepreneurial education in the academic community; (3) identify the variations and relationships regarding the Full Time Equivalency (FTE) allocation to program components to entrepreneurial education; and (4) analyze the role of Cooperative Extension Service in entrepreneurial education.

The data was obtained from the Annual Plan of Work of the selected states. This information was obtained from personnel in the United States Department of Agriculture, Washington D.C. The Plan of Work files provided FTE allocations by states for various program components. From this data, allocations were summarized by program components for state, regional, and national observations. Numerical information relative to FTE allocation to entrepreneurial education was taken from any new programmatic thrusts and personnel changes that would be reflected in the FTE allocation. Correspondence was addressed to the Evaluation Specialist in each state that was included in the sample.

Entrepreneurial education was identified as a sub-component under a variety of program areas. It was evaluated in terms of variations and relationships with Agriculture, Natural Resources/Public Policy, Community Development, Home Economics and Youth work. The analysis of the data indicated increases in the number, variety and support for entrepreneurial education. Some very significant relationships and variations existed among the four extension regions regarding FTE allocations. However, when expenditures or allocations for other extension programs were made, they were also made for entrepreneurial education. One conclusion is that the Cooperative Extension Service attempts to respond to America's critical concerns and entrepreneurial education is being initiated in program components.

Kolade, B. A comparison of pedagogical classroom instructional problems perceived by beginning and experienced Michigan vocational production agriculture teachers. Doctoral dissertation. Michigan State University, East Lansing.

The purpose of this study was to identify and compare pedagogical classroom instructional problems perceived by beginning and experienced Michigan vocational production agriculture teachers. The study investigated teacher problems, areas of classroom instruction in which major problems occurred, differences in problems perceived by beginning and experienced teachers, and perceived problems that were attributed to the teacher's characteristics.

The study concluded: (1) neither beginning nor experienced teachers perceived major levels of difficulty in any of the seven general areas of classroom instruction; (2) with the exception of two areas, Planning for Instruction and Establishing Classroom Climate, the beginning teachers perceived greater levels of difficulty than experienced teachers; (3) beginning teachers perceived a significantly higher degree of difficulty than experienced teachers in four pedagogical classroom instructional areas (Establishing Classroom Climate, Selecting and Using Instructional Materials/Aids, FFA and SOEP); (4) there was a significant difference in the area of Selecting and Using Instructional Materials/Aids for teachers who perceived "non-existent to moderate" administrative support when compared with those teachers who perceived "supportive to very supportive" administrative support.

Moore, Eddie A. (1987). The potential for Agriculture in the Classroom as an integral part of agricultural education. Staff Study. Michigan State University.

The purpose of the study was to identify agricultural education teachers who were interested in providing some of the leadership for local "Agriculture in the Classroom" initiatives. The respondents were asked to respond to the following questions: (1) At what level in your school district would you initiate an effort to increase the utilization of agriculture and natural resource concepts and materials to enhance the learning of students? Why this level? (2) What obstacles do you foresee in developing such an effort? and (3) Do you think such an effort would benefit your vocational agriculture program? If so, why? If not, why?

Nearly 40% of the agricultural education teachers responded to the survey as a result of two mailings. Over 95% of the respondents indicated that local Agriculture in the Classroom efforts would benefit their programs for various reasons. Fifty-four percent of the teachers indicated that they would initiate Agriculture in the Classroom efforts at the elementary school level. Twenty-six percent felt the middle school level would be their target grades while 20% were interested in initiating

Agriculture in the Classroom activities at the high school level.

Several conclusions and implications were presented as a result of the study. First of all, there is potential for making Agriculture in the Classroom an integral part of agricultural education in Michigan. However, if such an effort is to be successful, an enormous amount of creative thinking and planning must occur at the local level. Providing release time for agricultural education teachers and other key school personnel must be given a high priority during the early planning stages. Additionally, financial support will have to be secured to implement quality local efforts. In school districts where vocational agriculture student enrollments have significantly decreased, the agricultural education program should be redirected to serve the larger school population. In light of the challenges facing agricultural education and the Governor's Task Force on the Revitalization of Agriculture Through Research and Education, it was also concluded that the timing seemed to be right for re-directing agricultural education in some school districts.

Steele, Roger Eugene. Factors affecting practical agricultural training experiences for graduate students from developing countries. Doctoral dissertation. Michigan State University, East Lansing.

This study was designed as a response to the need identified by international students for more experiential learning opportunities. The purpose of the study was to examine the factors affecting agricultural training experiences for graduate students from developing countries who were studying at colleges and universities in the United States.

Five groups were identified from within a strategically selected survey population in Michigan: (1) graduate students from developing countries enrolled in agriculture programs; (2) faculty advisers; (3) Cooperative Extension Service field agents; (4) County Extension Directors; and (5) vocational agriculture instructors. Attitudes toward various aspects, problems, terms, and conditions related to practical experiences were measured by using a mail questionnaire.

Data from the 426 questionnaires mailed to eligible members of the sample population (90% return rate) were analyzed using: (1) frequencies and measures of central tendency and dispersion; (2) cross-tabulations; and (3) one-way analysis of variance (ANOVA) and t-tests.

The eight research questions were used to systematically report the findings. Nine conclusions were presented, each followed by a discussion with references to related study findings and relevant literature. Five implications were drawn from the

findings and conclusions.

Tchouamo, Isaac Roger. (1987). Perceptions by farmers, extension agents and researchers of linkages among and between organizations involved in the development and dissemination of agricultural innovations in Cameroon. Doctoral Dissertation. Michigan State University, East Lansing.

The purposes of this study were to (1) assess the current formal and informal linkages among and between subsystems involved in the development and dissemination of agricultural innovations; and (2) examine perceptions by farmers, extension agents, and researchers of the linkages between the Institute of Agronomic Research (IRA), the extension service and the production subsystem.

The three groups which were the sources of data were (1) farmers from three divisions of the West-Province, (2) agricultural researchers of the Institute of Agronomic Research, and (3) extension workers from the Ministry of Agriculture and the Rural Development Project of the West Province.

Two major crops, maize (a food crop) and Arabica coffee (an export crop), were used to give some specific focus to the measurement of perceptions. One of the criteria for identification of the population of researchers and farmers was the criterion of working on maize and/or Arabica coffee. This resulted in the identification of 32 researchers at five research stations, and 265 randomly selected farmer-leaders.

Lists of extension workers were obtained from the six Divisional Delegations of Agriculture and the six agricultural sectors (Rural Development Project of the West Province).

A three-part questionnaire, prepared in English and French was developed for completion by the selected respondents. The information collected consisted of personal and situational characteristics, perceptions about current linkages within and between the three subsystems, and opinions about 11 statements related to collaboration and inter-system actions.

Data from the 412 completed and usable questionnaires (83.56% return rate) were analyzed through the use of analysis of variance and t-tests.

The five research questions were used as the basis for summarizing the findings and presenting the conclusions. The three groups were in agreement on the importance of linkages among and between the groups but they perceived differently the extent to which linkages were taking place. Five conclusions were followed by two recommendations: one for improving linkages and the other for future research.

Aherin, Robert A. (1987). The prediction and analysis of safety among dairy farmers in central Wisconsin. Doctor of Philosophy Thesis, University of Minnesota, St. Paul.

Professionals involved in occupational safety and health have indicated that a more complete understanding of human behavior is essential to the development of effective safety educational programs. The objective of this study was to test the hypothesized model of the theory of reasoned action for its ability to analyze selected farm safety behaviors. The theoretical behavioral determinants of behavioral intention, attitude, behavioral belief, and subjective norm were evaluated for each of six behaviors.

The study involved dairy farm operators who participated in the Greater Marshfield Wisconsin Health Maintenance Insurance Plan. Two data collection stages were involved. First, a simple random sample of 100 farmers were requested to complete a self administered free response questionnaire that identified the salient model belief of the population. Completed questionnaires were returned by 65 subjects. Second, to measure the components of the theoretical model, a random sample of 400 dairy farm operators were asked to evaluate behavioral intention, attitudinal, belief, and subjective norm statements for each behavior. A semantic differential scale was used to measure these components. The self-administered mail-back survey instrument was completed by 247 subjects.

To describe the strength of relationship between each component of the theory, correlation coefficients and multiple correlation coefficients were derived. Significant positive relationships were found for all components of the theory evaluated. The external variables of age, educational level, sex, cow herd size, milk production, and average hours worked per week on the farm proved essentially not to have any primary effects on determining the behavioral components.

The multiple correlation coefficients derived for the predictor variables of attitude and subjective norm to determine their correlation with behavioral intention for some of the behaviors may have been attenuated by implicit behaviors. Researchers should be cognizant of this when developing behavioral statements for evaluation.

The study showed support for utilization of the theory of reasoned action in the analysis of safety behaviors. The effectiveness of safety educational efforts to modify undesirable behaviors may be enhanced through application of the model in obtaining a more complete understanding of the determinants of behaviors.

Casey, M.A. (1987). An overview of current problem solving literature: Implications for secondary vocational education. Master of Arts Plan B Paper, University of Minnesota, St. Paul.

The study consisted of a literature review of current problem solving literature in educational psychology to determine how this literature

relates to problem solving methods of teaching in secondary vocational agriculture.

The literature suggests that a number of features should be included in the teaching of a problem solving course including: representation methods; categorization skills; planning strategies; heuristics; and metacognition.

Recommendations: Secondary vocational agriculture instructors should teach students how to represent important factors of Problems through the use of diagrams, notations, or sketches so they are better able to understand the problem. People remember material better if they are able to put it in some type of category, hierarchy, or network. Teaching students to categorize material for themselves will help them code information in memory for easier retrieval. Planning strategies help one look for ways to solve problems. Teaching these strategies, including breaking a problem into smaller parts, forming sub-goals or using analogies, help students be more systematic in their attempts at problem solving. The feature which may be most strongly developed in secondary agricultural education is the teaching of heuristics. Metacognition is an important skill in problem solving. We should help students develop monitoring skills for attention and memory and encourage over-learning of important material.

Agriculture teachers should explicitly teach problem solving skills. There seems to be consensus that skills taught explicitly are better learned than those taught through implicit methods only. To teach these skills explicitly teachers would need to be trained in the process. Teachers would have to understand the processes and be able to explain them to the students.

Drees, D.A. & Bear, W.F. (1987) An evaluation of the use of drill and practice computer instructional materials for reviewing instruction. Master of Arts Plan B Paper, University of Minnesota, St. Paul.

The problem addressed in this study was to compare student achievement test scores when they used drill and practice computer instructional materials with their test scores when they used printed instructional materials to review subject matter. Twenty high school seniors enrolled in two separate sections of a farm building construction course were used as the subjects for testing this problem.

A counterbalanced quasi-experimental design was chosen because more than one treatment could be assigned to the subjects and therefore required fewer students. Each student was administered two treatments, but the order of administering the treatments was reversed for the two groups. This eliminated the possible confusion of order and treatment effects.

The study indicated that students achieved higher test scores on the units taught with the aid of computer instructional materials than in the units taught with written instructional materials. It also indicated that students with higher class rank achieved higher scores on the units taught with the aid of written instructional materials than did lower ranking students.

Legried, C.L. (1987). The status of training and development of Minnesota agribusinesses. Master of Arts Plan B Paper, Funded through the Training and Development Research Center, University of Minnesota, St. Paul. Funds provided by Northern States Power.

The Purpose of this study was threefold: to discover the extent of training in Minnesota agribusinesses, to identify the background of those who do the training, and to identify the tasks those people perform.

The Participants were trainers representing companies drawn from the 1985 Minnesota Ag Manual listing all Minnesota agribusinesses.

The participants completed a questionnaire developed from combining two previously tested instruments. One was demographic in nature, obtained from Green's (1985) study, and the other was taken from McLagan's (1983) study of training roles.

About two thirds of the 90 companies surveyed had training programs within their organization with about one-third having at least one full-time trainer and another one-half having at least one part-time trainer. One-half of those companies surveyed had used consultants.

A majority of the individual respondents were from large organizations with over 500 employees, held management positions, and functioned in the departments of human resources, sales and training. Judging by the number of years of experience, type of experience, and average trainer age, training is not an entry level job. Prior experience in management and sales was frequent. Previous teaching experience was low. However, the most frequent majors were agriculture, business and education. Two-thirds of the respondents had bachelor's degrees and almost 20 percent had advanced degrees.

Most trainers fulfilled training functions for only 50 percent of their total job time. It was apparent that agribusiness trainers perform a wide variety and a number of roles often performing five or more of the defined roles. Eighty percent spent time instructing while sixty percent act as program administrators and individual development counselors. The least performed role was of theoretician.

Methods of needs analysis were highly subjective. Objective methods not frequently used were expensive and time consuming.

Recommendations were made based on the findings.

Morse, R.A. (1987). Minnesota extension reorganization 1987. MEd paper, University of Minnesota, St. Paul.

The purpose of the research was to determine the understanding and reaction of Minnesota Extension Personnel towards the reorganization. The study includes responses for interviews from a series of eight questions conducted with six field agents, two district directors, and two extension executive committee members. The three main program areas of agriculture, 4-H and home economics were adequately represented by both field agents and administration. Representatives of MES were purposefully selected within an 80 mile radius of the Twin Cities in order to minimize incurred expenses. The field agents were geographically distributed within the 80 mile radius representing an urban and rural setting equally. Requirements that were met by the field agents included employment within extension for at least live years and located within the county at the time of the report. Field agents were also guaranteed confidentiality.

The study addresses the strategy plan of MES, Focus on People, the mission, issues of agent specialization, clustering and issues programming, the balance between administration and county staff and the future of extension in Minnesota.

The study found that there was a basic and consistent understanding among extension staff towards the reorganization. However, there were problems concerning workload, burnout and stress of county staff, lack of communication between administration and field staff as well as administration and county government, and that administration is out of touch with county realities.

The implications of the internal problems is the loss of team effort and the weakening of the extension system in Minnesota. If these problems are not addressed and rectified, it may very well cause dissent, negative perceptions, lack of acceptance of change and an undetermined decrease of organizational pride, and hurting the public image of extension in Minnesota.

Westrom, Lyle E. (1987). The utilization of the problem solving method of instruction by vocational agriculture instructors and its impact on students in vocational agriculture classes. Master of Arts Plan B Paper, University of Minnesota, St. Paul.

The purpose of the study was to determine to what extent the problem solving method of instruction was used by vocational agriculture instructors in Minnesota and to what degree high school vocational agriculture students' problem solving skills differed as a result of instructors' utilization of problem solving.

Minnesota high school vocational agriculture instructors were the population for the study. A purposive sample of 147 instructors was selected. Instructors were mailed a twenty-five item questionnaire designed to determine the level to which the problem solving method of instruction was employed; 104 (70.9%) responded. A jury of problem solving experts determined which responses were most congruent with problem solving utilization. Instructors were then stratified into top, middle and bottom problem solving usage groups.

Five instructors per strata were randomly selected. Students (165) enrolled in farm management courses taught by these fifteen instructors were asked to solve an unfamiliar farm management problem. Students were scored for each step of the problem; scores then compared to their instructors' problem solving group.

Analysis of variance found no significant difference ($p \leq .05$) between the students' scores on any step of the management problem and their instructors' problem solving group. The findings suggest that the problem solving method of instruction as identified does not improve students' abilities to solve problems.

MISSISSIPPI

Atherton, J. C. (1987). Video simulation as an instructional delivery method for teaching agricultural professionals and students. Master of Science Thesis, Mississippi State University, Mississippi State.

The purpose of this investigation was to determine if there was a significant difference in the learning outcomes of students being taught specific computer applications software using two different instructional delivery methods. The instructional delivery methods investigated were supervised laboratory (traditional delivery) and video simulation (experimental delivery). A clinical model was employed utilizing a posttest-only control group design with a counterbalanced extension, in which the control and treatment groups were rotated for a second replication, as a means of internally replicating the study. The population consisted of students enrolled in AEE 5203/7203, Application of Computer Technology to Agricultural and Extension Education, spring semester, 1987, at Mississippi State University.

Means and standard deviations of assessment activity scores and times needed to complete the activities were determined. Analysis of variance was calculated so that inferences might cautiously be made to similar intact groups.

The results of the study indicated no significant difference in the time required to complete a given activity and the proper use of commands between students taught computer applications using the supervised laboratory delivery method and those taught using video simulation. There was no significant difference in retention between the two groups.

From the results of this investigation it was concluded that video simulation can be effectively used as an instructional delivery method for teaching computer applications software when computers or software are limited.

Deeds, J. P. (1987). Criteria for faculty selection in agricultural education compared to those used in colleges of education. Staff study, Mississippi State University, Mississippi State.

A study of indicators of quality used for faculty selection by chief administrators (CEOs) in agricultural education and a comparison to indicators ranked by CEOs of schools, colleges, or departments of education (SCDEs). Individuals responsible for hiring new personnel in 73 of 90 agricultural education departments responded to a mailed survey in 1986. The data were compared to data received from 154 CEOs of SCDEs out of a sample of 243 completed by Moore (1985).

CEOs of agricultural education departments placed the most importance on personal qualities and documentation of teaching effectiveness. The rankings of the CEOs of the two groups varied significantly at the .05 level on 15 of the quality indicators, six of which were ranked in the top eight of each group.

CEOs in the SCDEs placed greater importance on six items: a) Preparation in an area of specialization; b) Specificity as to teaching assignment and the type of institution in which it occurred; c) Racial/ethnic background; d) Elected officers in professional organizations; e) Number of monographs/books authored, and; f) Committee responsibilities at university level. CEOs in agricultural education considered nine items more important than those administrators in education. They were: a) Number of years and quality of teaching assignments; b) Unquestionable integrity; c) Acceptable moral beliefs and practices; d) Compatibility with colleagues'; e) Emotional stability; f) Teacher solicited student evaluation; g) GRE, MAT or other standardized test scores; h) Amount and quality of advising responsibilities, and; i) Participation in workshops and conferences.

The study has implications for agricultural education departments in the hiring process, especially those administered in colleges of education.

Jackson, G. B. (1987). A relational study of teacher attitudes, program attributes and supervised occupational experience in vocational horticulture in four southeastern states. Master of Science Thesis, Mississippi State University, Mississippi State.

This study determined the attitudes of the vocational agriculture teacher related to supervised occupational experience (SOE) programs and described the attributes of first year horticulture programs. The research sought to: (1) Describe teacher attitudes, student enrollment, amount of SOE-related classroom instruction and number of field supervisory visits to first year horticulture students in Alabama, Florida, Georgia, and Mississippi; (2) Determine differences among attitudes of teachers toward SOE in first year horticulture programs; (3) Determine relationships between the attitudes of teachers toward SOE and five constructs of SOE programs; (4) Describe relationships between attitudes of teachers and student enrollment in first year horticulture programs; (5) Describe relationships between attitudes of teachers and amount of SOE-related classroom instruction in first year horticulture programs, and; (6) Describe relationships between attitudes of teachers and number of field supervisory visits made to first year horticulture students.

The frame identified 173 teachers of first year horticulture students in Alabama, Florida, Georgia, and Mississippi. One hundred and thirty-four teachers were randomly chosen to participate. Complete data were obtained from eighty-three teachers (62%).

The results and/or conclusions of the study were as follows: (1) Teachers were undecided about their attitudes toward SOE and four constructs of SOE which included job preparation, classroom instruction, teacher responsibility, and administration; (2) Teachers disagreed with the statement "SOEP can be effectively conducted without summer contracts for vocational agriculture teachers of specialized horticulture programs;" (3) There were no significant differences in teacher attitudes toward SOE among states; (4) Teachers attitudes toward SOE were not affected by the number of students enrolled; (5) Teachers spent an average of one to five hours of classroom time on SOE-related instruction each month, and; (6) Teachers made an average of five to ten field supervisory visits to first year horticulture students each month.

MISSOURI

Ahmed, R. U. (1987). Adoption of improved farm practices by selected rice growing farmers of Bangladesh. Doctoral dissertation, University of Missouri, Columbia.

The primary purpose of this study was to examine the relationship of selected characteristics of farmers and their adoption of improved farm practices in Comilla Kotwali thana of Bangladesh. The secondary purposes were: (1) to study the relationship between the adoption of improved farm practices and farmers' perceptions about extension, credit and loan services, and changes in farming; (2) to study the relationship between the total perception scores and selected farmer characteristics; (3) to ascertain how the farmers' characteristics were correlated with the adoption of improved farm practices; and (4) to compare the adoption behavior between the model farmers and general farmers.

Data were collected from 118 model farmers and general farmers during an institute training session. Pearson product moment correlation coefficients, regression analysis, and analysis of variance were used to test the null hypotheses.

Significant positive relationships were found between the adoption of improved farm practices and years in farming and size of farm in rice cultivation. Significant relationships were also found between the adoption of farm practices and the farmers' perception about extension services, credit and loan services, and changes in farming. No significant relationship was found between the total perception score and the farmers' characteristics. A linear combination of five of the ten independent variables was found to account for 51 percent of the variance. There were significant differences between the scores for general farmers and model farmers.

The following conclusions were developed as a result of this study: (1) The farmers most likely to adopt improved farm practices are those who have characteristics such as more education, more years in farming, and more acres of land under rice cultivation. (2) Model farmers tend to use more improved farm practices than general farmers. (3) Model farmers tend to be older and have more farming experience than general farmers.

Birkenholz, R. J., Stewart, B. R., and Linhardt, R. E. (1987). Evaluation of instructional uses of microcomputers in secondary vocational agriculture classes. Staff study, University of Missouri, Columbia.

The purpose of this study was to assess the effects of three strategies which incorporated a microcomputer component in teaching vocational agriculture. The three teaching strategies were tutorial, drill-and-practice, and simulation. Each teaching strategy was compared with one another and a lecture/discussion teaching strategy.

The population defined for this study consisted of 5,784 junior and senior vocational agriculture students in Missouri who were enrolled in a vocational agriculture course in which lessons on soil erosion could appropriately be taught. A cluster sampling technique was used and resulted in the random selection of 36 vocational agriculture classes. Students in each selected class were randomly assigned to one of four treatment groups to control for anticipated differences in the effectiveness of individual teachers.

This study utilized a posttest only, comparison group design in which the lecture/discussion treatment was used for comparison purposes. Each treatment group utilized a microcomputer program designed specifically to constitute the experimental treatment. Following each groups' 20 minute microcomputer experience, students returned to the classroom to resume the lesson with their classmates.

Usable data were collected from 312 students in 31 classes. The following conclusions were drawn as a result of this study: (1) Student achievement is essentially equal when taught using any of the three microcomputer-enhanced teaching strategies or a lecture/ discussion teaching strategy. (2) Student attitudes are not appreciably affected as a result of the use of a microcomputer-enhanced teaching strategy. (3) Previous achievement and academic rank are the best predictors of student achievement.

As a result of this study, it was recommended that teachers could supplement or replace a portion of their traditional lecture/ discussion instruction with microcomputer-assisted instruction. Microcomputer programs involving tutorial, drill-and-practice, or simulation activities could be used with equal effectiveness.

Brandy, O. C. (1986). Factors influencing student enrollment in vocational agriculture. Doctoral dissertation, University of Missouri, Columbia.

The purpose of the study was to examine the relationship of selected factors to students' decisions relative to enrollment in vocational agriculture in Missouri secondary schools.

The sample included 370 students enrolled in vocational agriculture in 24 schools, drawn from a population of 3,911 freshmen students enrolled in vocational agriculture from all 245 schools with vocational agriculture programs in Missouri. A control group of freshmen students not enrolled in vocational agriculture was surveyed in each of the selected schools. Parents of both groups of students were also surveyed. The dependent variable was enrollment. Selection of the independent variables was based upon a literature review of factors considered as influential upon students' enrollment decision. The data obtained were analyzed by using a MANOVA and the chi square procedure, which produced a contingency coefficient.

The following conclusions were developed as a result of this study: (1) Vocational agriculture teachers and others involved in developing and promoting vocational agriculture should focus their efforts on attracting secondary students as early as their first year of junior high school. (2) Students enrolled in vocational agriculture are different from those not enrolled in vocational agriculture, in terms of the four factors considered (personal, economic/job related factors, interest and attitude, and educational objectives). Recognizing that this difference was due largely to differences in interest and attitude, greater use should be made of interest inventories and attitude measures to identify potential vocational agriculture students. (3) While a number of students in both groups liked agriculture, overall non-vocational agriculture students were not interested in vocational agriculture. (4) Students' interest and desire to be in the FFA, and their belief that vocational agriculture provided them with job related skills, were the most significant variables positively affecting the enrollment decision of ninth graders. (5) Of all the variables tested, school counselors had the least influence upon student enrollment decision.

Chapman, R. B. (1987). Agricultural mechanics knowledge and aptitude of students in area vocational-technical schools. Doctoral dissertation, University of Missouri-Columbia.

The purpose of the study was to ascertain whether there was a difference in entry level agricultural mechanics competencies among students enrolled in advanced agricultural mechanics courses in Missouri area vocational-technical schools.

The sample consisted of 312 students enrolled in advanced agricultural mechanics courses in Missouri area vocational-technical schools. Two tests were given (The Bennett Mechanical Comprehension Test and the Agricultural Mechanics Competency Evaluation Instrument) during the first week of the 1986-87 school year. An information sheet was used to collect demographic data on each student.

The data were analyzed by the use of analysis of variance, product-moment correlation, and stepwise regression analysis.

To the extent that the data and findings resulting from the research procedures utilized in this study were valid and reliable, the following conclusions seem warranted: (1) Students entering an advanced agricultural mechanics course in Missouri's area vocational-technical schools in the 1986-87 school year had approximately equal agricultural mechanics competencies skill levels. (2) Students should be admitted to an advanced agricultural mechanics course without having the prerequisites of Agricultural Science I and Agricultural Science II. (3) Vocational agriculture students should be encouraged to take additional math courses in high school if they are interested in agricultural mechanics. (4) Girls have lower mechanical aptitude than boys in advanced agricultural mechanics courses. (5) Industrial arts did not prove to be a good prerequisite for an advanced agricultural mechanics course. (6) Greater differences existed between schools on the Agricultural Mechanics Competency Evaluation Instrument than the Bennett Mechanical Comprehension Test. (7) Father's occupation did not affect students' scores on the Agricultural Mechanics Competency Evaluation Instrument or the Bennett Mechanical Comprehension Test. (8) Students living on farms scored higher than students who lived in an urban setting.

Habeeb, M. S. (1986). Perceptions of the Missouri agricultural extension service. Doctoral dissertation, University of Missouri, Columbia.

The purpose of this study was to ascertain the quality of the agricultural extension programs as perceived by the extension council officers and extension clientele (i.e. farmers) regarding program accomplishments.

The population consisted of all extension council officers and extension clientele in Missouri. The sample consisted of 400 extension program participants representing the clientele group and 150 individuals representing the extension council officers. Young and Cunningham (1971) developed the perception instruments which were mailed to the participants.

The data were analyzed using one-way analysis of variance, Fisher's Least Significant Test, Pearson-Product Moment Correlation Coefficient, and Multiple Linear Regression Stepwise Techniques.

To the extent that the data and findings resulting from the research procedures utilized in this study were valid and reliable, the following conclusions seem warranted: (1) Extension council officers and extension clientele were satisfied with the extension information and the extension specialists. (2) Extension council officers and extension clientele perceived extension methods and the agricultural extension program to be of equal value. (3) The extension council officers and small farm farmers were satisfied with the extension information and the extension agricultural specialist. (4) Extension council officers and the small farm farmers perceived the extension methods and the agricultural extension program to be of equal value. (5) The extension council officers and large farm farmers perceived the extension information, extension agricultural specialist, extension methods, and agricultural extension education program to be of equal value. (6) The number of extension meetings attended and extension contacts were positively related to small farm farmers' perception of extension information and the agricultural extension education program. However, there was significant, negative relationship with the innovativeness level. (7) The number of extension meetings attended was positively related to the small farm farmers' perception of extension agricultural specialists but was negatively related to their innovativeness level. (8) Small farmers reporting lower innovativeness levels have more positive perceptions of the extension methods.

Harbstreit, S. R. (1987). Educational needs of employees of urban agribusinesses. Doctoral dissertation, University of Missouri, Columbia.

The purpose of this study was to assess the educational/ training needs of employees of four urban agribusinesses as perceived by management/supervisory personnel. Differences in perceptions of educational/training needs between management levels and business sectors were investigated, along with relationships of management/ supervisory characteristics to perceptions of needs.

Agribusinesses selected for this study were members of the Kansas City Chamber of Commerce. Business categories selected for this study were agricultural products, agricultural supplies and services, horticulture, and agricultural mechanics. A business was randomly selected from each category and managers/supervisors were asked to respond to a questionnaire containing factors associated with educational/training needs.

Means calculated for specific educational/training topic needs revealed four topics with means above 3.0 on a 4.0 scale. These topics were: human relations, employee leadership, employee motivation, and decision making.

No significant difference was found between factors related to perceived educational/training needs and level of management/ supervision.

A significant difference was found between four factors related to perceived educational/training needs and business category. These items were: (a) participation in education/ training would result in greater job security, (b) additional technical agricultural knowledge was needed, (c) a greater knowledge of the agricultural industry was needed, and (d) jobs performed by employees are becoming more complex.

The following conclusions were developed as a result of this study: (a) A need exists for educational/training programs for urban agribusiness employees. (b) Participation in educational/training programs would improve the job performance skills of agribusiness employees. (c) Educational/training programs should be developed to address needs which are common to employees in the various agribusiness sectors. (d) Educational/training programs should be developed for agribusiness employees to meet the unique, technical needs of individual businesses.

McCaskey, M. J. (1987). A microcomputer simulation strategy in teaching vocational agriculture. Doctoral dissertation, University of Missouri, Columbia.

The purpose of this study was to assess the effectiveness of instruction utilizing a lecture/discussion teaching strategy in contrast to lecture/discussion teaching strategy which incorporated the use of a microcomputer simulation program. The study utilized a between-subjects after-only research design. A cluster sampling technique was used, which involved 144 students from 31 randomly selected Missouri vocational agriculture programs.

Five instruments were used to collect data needed to assess the effectiveness of the microcomputer simulation teaching strategy: first lesson test, post-experiment achievement test, microcomputer and subject matter attitude inventories, and a student information form.

The study involved a comparison group, which was taught the lesson using a lecture/discussion teaching strategy. The microcomputer treatment group was taught the same lesson but a portion of the lecture/discussion was replaced by a microcomputer simulation program.

A t-test was used to test for mean differences. A correlation procedure was used to assess the strength of the relationship between post-experiment achievement and attitude scores and selected student characteristics. A stepwise multiple regression procedure was used to examine the variance associated with post-experiment achievement and attitude scores and selected student characteristics. An analysis of covariance procedure was used to test for mean differences in student achievement when previous knowledge of subject matter was equalized.

Major findings of the study were: (1) there was no apparent advantage or disadvantage in student achievement for students who utilized the microcomputer simulation program in the instructional process, (2) the best predictor of student achievement was their past achievement, (3) student attitudes toward the subject matter were essentially the same after the experiment, and (4) student microcomputer attitude scores were the best predictor of student post-experiment subject matter attitudes. These findings revealed that vocational agriculture instructors could use a similar microcomputer program to supplement regular instruction without adversely affecting student achievement.

Ogle, T. D. (1987). A microcomputer drill and practice strategy in teaching vocational agriculture. Doctoral dissertation, University of Missouri, Columbia.

The purpose of this study was to ascertain the effect of using a lecture/discussion method with a microcomputer component, in comparison to the more common lecture/discussion method, in teaching soil management. Differences in achievement and attitudes toward subject matter were investigated, along with relationships of student characteristics to achievement and attitudes.

Missouri vocational agriculture students enrolled in upper level courses comprised the population. The sample was composed of 136 students from 31 randomly selected schools. The comparison group received conventional (lecture/discussion) instruction while the experimental treatment group was removed from the classroom to use a drill and practice microcomputer program. Both groups completed an examination and an attitudinal survey.

Cronbach's alpha was used to estimate instrument reliability. Hypotheses were tested using Pearson correlation coefficients, t tests, and stepwise linear regression procedures.

No significant difference was found between achievement scores of the groups. Soil management experience correlated significantly with microcomputer treatment group achievement while computer experience correlated significantly with achievement in the conventional lecture/discussion group. A significant amount of the variance in achievement scores could be explained by initial test scores, grade point averages, and soil management experience.

A significant difference was found between attitudes toward subject matter. Students receiving computer instruction had more positive attitudes. Initial attitudes toward soil management and soil management experience correlated significantly with students' attitudes. A significant amount of the variance of attitudes toward soil management was explained by soil management experience and attitudes toward computers.

The following conclusions were developed as a result of this study: (1) Lecture/discussion and lecture/discussion with a microcomputer component are equally effective methods of teaching secondary vocational agriculture students. (2) Student performance in the area of soil management can be substantially predicted using their soil management experience, previous knowledge, and grade point average. (3) Students' attitudes toward subject matter are affected positively by the use of lecture/discussion with a microcomputer component as compared to lecture/discussion instruction alone.

Bertlesen, D. L. (1987). Perceptions of who should perform selected 4-H tasks in Montana. Master of Science Professional Paper, Montana State University, Bozeman.

This study determined the perceptions of 4-H program assistants, county agents, and 4-H leaders regarding who should perform selected tasks to meet the needs of the 4-H program in Montana. Data for the study were gathered through the use of a mailed questionnaire sent to a population of 14 county agents, 13 4-H program assistants, and 310 4-H leaders. Information from the returned questionnaires was coded and entered into a word processing program to create a non-document data file. The program, "HISTOGRAM," taken from the Montana State University Statistical Package (Lund, 1983), was used to statistically analyze the data.

Based on the results of the study, it was concluded that over half of the assistants and almost half of the leaders had three years or less of extension experience. There were differences in the perceptions of program assistants, county agents, and 4-H leaders regarding who should perform the majority of the selected tasks to meet the needs of the 4-H program in Montana. County agents saw themselves as having primary responsibility for many of the selected tasks and indicated very limited primary responsibility for the program assistant. Program assistants saw a much broader role of primary responsibility for themselves than did the agents. The 4-H leaders indicated program assistants and county agents "should" perform the majority of the selected tasks but saw limited primary responsibility for both groups. There was not always a clear understanding of who should perform the selected tasks; county agents and program assistants saw themselves as performing but not having primary responsibility for many of the same tasks.

As a result of the findings of this study, the following recommendations were made: the role of the program assistant should be communicated to individuals involved in the 4-H program; a determination of primary responsibility should be made on all selected tasks; job descriptions for program assistants should be written in a clean, unambiguous style; county agents should delegate primary responsibility for those tasks which have been assigned to program assistants in the job description; the program assistant's responsibility needs to be developed in accordance with the job description; job descriptions for program assistants should be periodically updated to meet program priority changes and program leaders should carefully study the data and develop additional recommendations for use at the local level.

Hilliard, Carol A. (1987). The need for remedial math programs in Montana's community college agricultural programs. Master of Science Professional Paper, Montana State University, Bozeman.

This study determined the need for remedial basic math programs in the agriculture departments of Montana's community colleges to develop those mathematical competencies that are necessary for the successful completion of required agricultural courses. Data for the study were gathered through the use of a mailed questionnaires sent to the agriculture department heads of the three community colleges in Montana which offer agriculture programs. Basic math skill tests were sent to 60 Montana vocational agriculture teachers and administered by them to a population of 406 senior vocational agriculture students within their programs. Information from the returned questionnaires and tests was recorded, analyzed, and tabulated by the researcher.

Based on the results of this study, it was concluded that there is a need for remedial basic math programs in the agriculture departments of Montana's community colleges. The majority of students who plan to enter a community college and enroll in an agriculture program are in need of basic math skills remediation. Most of those students had tests scores in the "low" range, had only two years of high school math and had GPA's of 2.1 to 3.0.

Jackson, J. R. (1987). Perceptions of career education-counseling programs for vocational agriculture students in Montana high schools with less than 350 students. Master of Science Professional Paper, Montana State University, Bozeman.

This study determined the perceptions vocational agriculture teachers and counselors have toward the career education-counseling programs offered to vocational agriculture students in grades 9 through 12 in Montana high schools with less than 350 students. Data for this study were gathered through the use of mailed questionnaires sent to counselors and vocational agriculture teachers in 58 Montana high schools. Information from the returned questionnaires was statistically analyzed using the "MSU STAT" program.

Based on the results of this study, it was concluded that the ratings given by the vocational agriculture teachers and the counselors to 19 career education-counseling activities, eight career education-counseling material and equipment areas, four career education-counseling facility areas, and four career education-counseling support areas, are dependent upon the individual's position as a vocational agricultural teacher or as a counselor. In addition, the counselors' ranking of 19 career education-counseling activities for frequency was different from their ranking

of the activities for importance. However, five of the seven career education-counseling helping activities were ranked in the top half by both vocational agriculture teachers for importance and adequacy, and by counselors for importance and frequency. The vocational agriculture teachers and counselors were in agreement as to the adequacy of the career education-counseling areas.

Previous research indicated that teachers perform the majority of the counseling in today's schools. However, it was concluded from the demographic data that most teachers have not received adequate instruction in career education-counseling. The data further show that counselors have four hours or less each day to spend counseling students.

Bishop, D. and Jackson, J. (1987). Science in vocational education; it's a team effort. Staff Study, Montana State University, Bozeman.

The purpose of this study was to determine the degree to which Montana secondary vocational instructors are including the generic principles of Biology, Earth Science, Physics and Chemistry in their instructional program and provide data for local boards of education to determine the appropriateness of using vocational education courses as a substitute for a portion of the high school graduation requirement. The respondents were asked to react to 109 science competencies by indicating if they applied the competencies in their instructional program and, if included, rate the competency as to its perceived importance to the student's success in the vocational instructional program.

Data indicated there is a wide variance in the number and importance of science competencies being applied within the instructional programs in vocational education. Some secondary vocational instructors do include the application of a large number of science competencies. Vocational agriculture instructors include numerous competencies in Biology, Chemistry, Physics and Earth Science. Industrial arts most frequently emphasizes Chemistry and Physics competencies. Biology and Chemistry science competencies are frequently applied in home economics, while trade and industrial instructors frequently include the application of Chemistry and Physics competencies.

NEW YORK

Berkey, A.L. & Sutphin, H.D. (1987). Guidance information and placement practices, and program scheduling sequences related to student access to vocational agriculture programs in New York secondary schools. State Education Department Funded Project. Cornell University, Ithaca.

The objectives were to assess (1) guidance counselor's knowledge about agricultural job opportunities, (2) identify the importance of criteria used for placement in agriculture courses, (3) determine the effect of course scheduling and sequencing on placement, and (4) identify positive and negative factor s affecting placement.

Naturalistic inquiry using questionnaires and personal interviews were used. Data was collected from guidance counselors using a random stratified sample of 22 local schools and seven area occupational centers.

Findings show that individual student conferences are used prior to scheduling. Student career plans, educational plans, and grade average are considered by over two-thirds of counselors. All counselors were influenced by work experience, especially in agriculture. Recommendations by agriculture teachers and parents were influential for placement on most instances. Increased graduation requirements resulted in lack of periods and sections for agricultural enrollment.

Recommendations were for individualized schedule modifications, provision of information on agricultural job opportunities, identification of scheduling patterns that facilitate access, and systematic input by agriculture teachers on access options for students.

Sutphin, H.D. (1987). Curriculum analysis of New York State agricultural education by Bloom's taxonomy of educational objectives. State Education Department Funded Project. Cornell University, Ithaca.

The purpose of this project was to analyze the state agricultural education curriculum in terms of three domains of learning (cognitive, affective and psychomotor) and levels of "lower order" to "higher order" learning within the domains.

The research procedure was a modified Delphi. Five experts, independently nominated, responded to three rounds of the Delphi.

Performance objectives for 108 hours of Boak Agricultural Skills (BAC) were 91% cognitive, 9% psychomotor and 1% affective; and were 91% lower order and 9% higher order learning levels. Similar data were found for other areas of the curriculum.

Conclusions and recommendations addressed state test writing, curriculum revision and instructional strategies.

Senger, Vernon K. (1987). Readership assessment of "North Dakota Farm Research". Master of Science Thesis, North Dakota State University, Fargo.

The purpose of this study was to determine the readership of the North Dakota Farm Research, and to obtain the readers' reactions and assessments of the publication. Specific objectives were to determine 1) to what extent the recipients read the journal and what type of articles they preferred to read, 2) how often readers made use of the information in the journal, 3) the number of non-recipients who read the journal, 4) the readers' perceptions of present composition of the journal, 5) reading difficulty level, 6) readers' perceptions of the number and quality of illustrations used, and 7) a biographical profile of the readers.

A five percent systematic random sample of the total population was used. The total population consisted of the 9,833 names on the mailing list, and a five percent sample resulted in 492 names being selected. A questionnaire was selected as the best means of gathering the needed information. The first and third mailings consisted of a cover letter and a questionnaire. The second mailing consisted of a postcard reminder. A total of 284 usable questionnaires were returned for a final repsonse rate of 57.7 percent.

The vast majority of the respondents were male. Two-thirds of the respondents were between the ages of 31 and 60. One-half of the respondents had a college education. Two-thirds of the respondents reported their occupation as farming. Over two-thirds of the farmers had been farming over 15 years. The respondents' assessment of the present format and extent of readership was favorable. Two-thirds of the readers read selected articles in each issue, while almost 90 percent preferred to read about research results. Crop production was the major subject area the readers were interested in. The majority of the respondents felt that the present composition of the journal was acceptable. The passalong readership more than doubled the effective readership of the journal. For each recipient of the journal, there are an additional 1.3 readers of the publication.

Toussaint, John Augustus. (1987). Factors influencing North Dakota State University agriculture graduate students' interest in international employment. Master of Science Thesis, North Dakota State University, Fargo.

The primary objectives of this study were to determine 1) the interest of North Dakota State University agriculture graduate

students in international agriculture, 2) how North Dakota State University agriculture graduate students' experiences have helped them prepare for international employment, and 3) North Dakota State University agriculture graduate students' interest in more preparation for international agriculture.

A questionnaire was developed and delivered to all 130 agriculture graduate students in the College of Agriculture who were United States citizens. The questionnaires were delivered to the students on September 11, 1987. One hundred percent of the population responded to the questionnaires by October 3, 1987. Respondents were asked to complete a section consisting of five general information questions. Respondents were also asked to indicate their interest in international employment and their interest in more preparation in international agriculture on a four point Likert-type scale. Percentages were used in the data analysis.

This study showed that about 58 percent of the respondents were interested in international employment to some degree. Ten percent of the respondents spoke a foreign language fluently. Respondents showed more interest in international assignments lasting longer than a year as opposed to those lasting less than one year. All factors except income were considered important to some degree in influencing respondents' interest in international employment. Sixty percent of the respondents showed some degree of interest in enrolling for international agriculture courses if offered at North Dakota State University.

Barrick, R. K. (1987). The State role in supervising vocational agriculture programs. Staff study, The Ohio State University, Columbus.

The study was designed to investigate the perceptions of high school vocational agriculture teachers and state supervisors regarding their perceptions of the role of state vocational agriculture supervisors. The study was a replication of a 1980 study. Data were collected from a stratified random sample of teachers and all state supervisors in the U.S., using a mailed questionnaire. The results of the study were quite similar to the earlier findings. Generally, the perceptions of teachers regarding the role of state supervisors was higher in 1986. Differences in perceptions between teachers and supervisors were generally not found. Differences in perceptions of the current role and the expected role were not great, generally less than .35 on the 7-point scale.

Boone, Harry N., Jr., Newcomb, L. H., Resich, Kenneth W., and Warmbrod, J. Robert. (1987). Assessment of the effectiveness of recruitment strategies designed to attract high-ability non-traditional students. Staff study. The Ohio State University, Columbus, Ohio.

The primary purposes of this study were to describe the recruitment activities used by the College of Agriculture at The Ohio State University, determine the extent to which high-ability non-traditional students were enrolling in the College, and evaluate the effect various activities had on high-ability non-traditional students' enrollment in agriculture.

The population consisted of all students enrolled in the College of Agriculture between 1981 and 1986. Interviews were conducted with high-ability non-traditional students enrolled in the college between 1984 and 1986.

Fifteen recruitment activities were identified which were used by the College of Agriculture to attract students in the College. The activities were classified into activities designed to recruit traditional students, activities designed to recruit non-traditional students, and activities used to recruit both traditional and non-traditional students. High-ability non-traditional students were asked to judge the effect each activity had on their decision to attend The Ohio State University and to pursue an agricultural major.

The high school data collected produced evidence that the percent and number of high-ability non-traditional students had

increased since 1982. During the same time period the percentage of high-ability traditional students declined. The average number of high school English, math and science credits earned by high-ability non-traditional students increased significantly between 1981 and 1986. There were no significant changes in high-ability non-traditional students' composite ACT score, ACT English score, ACT math score, ACT science score, cumulative high school grade point average, and percentile class rank for the period between 1981 and 1986.

Characteristics of the high-ability non-traditional students enrolled in the College of Agriculture between 1984 and 1986 included; five percent urban students, twenty-four percent suburban students, forty-six percent of their parents owned or operated a farm or an agribusiness, and seventy-one percent have worked on a farm or an agribusiness. Family and high school guidance counselors were one and two respectively as a first source of infomation about The Ohio State University and the College of Agriculture for high-ability non-traditional students.

Chuatong, Pongpan. (1986). Factors associated with the problem-solving ability of high school students enrolled in vocational horticulture. Ph.D. dissertation, The Ohio State University, Columbus.

This study examined the relationships between problem-solving ability in horticulture and selected variables. Also examined was the canonical relationship between cognitive outcomes (problem-solving ability and achievement in horticulture) and the following six predictor variables: (1) academic aptitude of students, (2) extent to which teachers use problem-solving teaching behaviors, (3) degree of students' involvement in supervised occupational experience (SOE) in horticulture, (4) degree of students' participa- in the FFA, (5) grade level of students, and (6) content emphasis of the horticulture program in which students are enrolled.

The sample included 133 students enrolled in the horticulture programs in seven secondary vocational schools in Ohio. Data were obtained from available records, and directly from students using researcher-developed instruments. Correlational analyses were used including product-moment correlations, regressions, and canonical correlation.

Findings suggest that, generally, students did not demonstrate a very high level of problem-solving ability and general knowledge in horticulture. There were positive and substantial pair-wise relationships between problem-solving ability, achievement, and academic aptitude. Low positive relationships were found between problem-solving ability and SOE involvement and landscape content emphasis. Low to moderate associations were found between achievement and all independent variables, except

academic aptitude which was positively and substantially correlated with achievement.

Of all the variables studied, academic aptitude explained the highest proportion of variance in both problem-solving ability and achievement in horticulture. When academic aptitude was held constant, the program variables (all the independent variables except academic aptitude) together explained a significant proportion of the variability in both dependent variables. All the independent variables as a set predicted cognitive outcomes (problem-solving ability and achievement in horticulture) of students. Academic aptitude contributed most to the canonical relationship. Other predictors, except grade level, carried moderate weights in the relationship between the two sets of variables. Grade level was not important in the relationship.

Cook, Charles Brian. (1987). Behaviors exhibited by and the attributes of six effective and six less effective vocational agriculture teachers in Ohio. Master of Science Thesis, The Ohio State University, Columbus.

The study involved case study research methodology to determine the attributes and behaviors of the twelve teachers in the study. Student, teacher, and observational data were collected. The results indicated that the effective and less effective teachers did not perceive themselves to demonstrate different classroom behaviors. The students and the observer did find differences in the classroom behaviors of the effective and less effective teachers. The effective teachers were more effective than the less effective teachers based upon the findings of this study.

Diem, Keith George. (1987). The relationship of marketing activities and promotional methods used with county 4-H club membership in New Jersey and Ohio. Ph.D. dissertation. The Ohio State University, Columbus.

This study was ex post facto research with the primary purpose of determining how the use of promotional methods and marketing activities in 4-H related to the percent of potential youth served by 4-H clubs. A mailed questionnaire developed by the researcher was the primary means used to collect data about the census of county 4-H programs in New Jersey and Ohio. Information was also collected from U.S. Census documentation and Cooperative Extension statistical reports. A panel of experts determined that the questionnaire was content valid. The questionnaire was pilot tested in Pennsylvania, yielding Cronbach's alpha reliability coefficients of .90 and greater. A final return rate of 100

percent was attained. Correlations and other descriptive statistics were used. Stepwise multiple regression procedures were used to determine the best predictors of the dependent variable, percent of potential youth served by 4-H clubs.

There were 230 Extension professionals found to be working with 4-H in the 107 counties of the study. An average of nearly 26,000 potential youth per county were available to join 4-H, with eight percent of them served by 4-H clubs. Counties had an average of 50 percent of their populations living in urban areas. Counties had an average degree of use of promotional methods score of 2 out of a maximum frequency of use score of 5 and an average degree of use of marketing activities score of 2.4 out of a maximum score of 5. Generally, the least used promotional methods were advertising, particularly television, whereas there were a variety of types of methods which were most used. Key marketing activities such as long-term planning, identifying and targeting audiences and, subsequently, consideration of the needs and interests of potential audiences (not currently involved in 4-H) were generally the least used.

Six research hypotheses were tested at .05 alpha, determined a priori. Non-significant negligible and low relationships were found between both degree of use of promotional methods and degree of use of marketing activities with the dependent variable. Percent of a county's population living in urban areas was found to be the single best predictor of percent of potential youth served by 4-H clubs, explaining 61 percent of the variance (Pearson r = -.78).

Dlamini, Barnabas M. (1986) Perceptions of professionals in agricultural education regarding the agriculture teacher education program in Swaziland. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of the study was to describe professionals in agricultural education and determine their perceptions regarding the agriculture teacher education programs in Swaziland. The target population included 128 professionals in agricultural education consisting of 11 teacher educators, 9 state supervisors (inspectors) and 108 teachers. The study was a census. Descriptive correlational research employing a questionnaire was used. Content validity was established using a panel of experts. Cronbach's alpha was used to establish the reliability of the instrument, which ranged from .76 to .95. Frame, selection, measurement, and non-response errors were controlled.

Findings and conclusions were based on a data sample of 116 professionals in agricultural education (90% response rate). The population was assumed to be a sample of Swaziland professionals in agricultural education at a point in time, thus, permitting the

use of inferential statistics.

Descriptive statistics were used to organize and summarize the data. Analysis of variance was performed to compare groups on selected variables. Correlational techniques (Pearson product moment, point biserial, and Spearman rank-order correlations) were used to describe the direction and magnitude of relationships.

Results revealed that the majority of professionals in agricultural education were teachers in secondary schools, were males, were relatively young, were working in rural areas, held the associate degree, had low levels of experience in their work, received their training in Swaziland, and had not studied agriculture while in secondary school.

Professionals in agricultural education perceived the agriculture teacher education programs to be credible in terms of admissions standards, qualification of faculty, technical and professional courses taught, but doing less than adequately in the areas of student teaching, conduct of inservice courses for agriculture teachers, coordination and linkage with other institutions, general courses taught, and skill training.

Level of education slightly influenced the way professionals in agricultural education viewed the agriculture teacher education programs, whereas gender, work experience, age, type of profession, place of training, and place of work had no major influence.

Dlamini, Marietta P. (1986). College administrators' image of the agriculture teacher education programs: A national study. Master of Science Thesis, The Ohio State University, Columbus.

The purpose of this study was to determine the image of agricultural education programs held by deans and assistant deans in colleges of agriculture and education in the United States.

The conclusions derived were; the images of the faculty, services, and general areas of concern in agricultural education were high. However, the images of the students, research, and teaching were moderate. The college, region, and type of institution with which the administrators were affiliated, and selected characteristics of administrators, did not have major influence on the mage held of agricultural education programs.

Dorn, D'Andre Keith. (1987). Continuing professional education motivational orientations of state supervisors of agricultural education. Ph.D. dissertation, The Ohio State University, Columbus.

The major purposes of this study were: (1) to determine the principle motivational orientations of state supervisors of agri-

cultural education in relation to their most important activity of continuing professional education; (2) to identify selected demographic and organizational variables associated with the professional development of agricultural education supervision; and, (3) to determine relationships between motivational orientations and the identified independent variables.

The population of 110 state supervisors of agricultural education in the United States were mailed a self-administered 48-item questionnaire. The instrument included an information survey and the Education Participation Scale (E.P.S.), and an inventory of 40 possible reasons for participation in continuing education. A total of 70 useable responses were received, representing a 64 percent instrument return rate. Mean scale scores reflected the following E.P.S. orientations: Social Contact, Social Stimulation, Professional Advancement, Community Service, External Expectations, and Cognitive Interest.

The major findings of this study were: (1) the majority of respondents identified Professional Advancement or Cognitive Interest as their principal motivational orientations; (2) Social Stimulation was not disclosed as a principal motivational orientation; (3) The conference/seminar was the most important activity engaging the respondents' professional development participation; (4) Current and prior degree status was related to Community Service and External Expectations; (5) Social Contact, Professional Advancement, and Cognitive Interest each correlated with number of teachers supervised, scope of supervision, funding allowances, and requirement policy; (6) Social Contact exhibited the strongest association with most important type of activity.

Based on the findings, it was concluded that: the reasons influencing the continuing professional education participation of agricultural education supervision reflected the motivational orientations identified with other professional groups, and the continuing professional education engagements of agricultural education supervision appeared to be influenced by the need to either accomplish specific goals or perpetuate intellectual pursuits.

Endeley, Joyce Bayande Mbongo. (1987). Women farmers' perceptions of the economic problems influencing their productivity in agricultural systems: Meme Division of the Southwest Province, Cameroon. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to describe women farmers' perceptions of the economic problems that influence their productivity in agriculture, farm and non-farm activities, and personal characteristics in seven selected villages of Meme Division, Southwest Province, Cameroon. The extent to which relationships and differences existed between personal characteristics of women

farmers and their perceived economic problems were investigated.

The population consisted of 981 women farmers in seven selected villages in Meme Division of Southwest Province, Cameroon. A structured questionnaire was developed and used in collecting data from 295 randomly selected women farmers. The face-to-face interview technique was employed in collecting data. The study was descriptive and relational in nature.

The results obtained indicated that women farmers perceived that they have sufficient access to land; insufficient access to labor and infrastructural facilities; and lacked access to improved farm tools, agricultural production inputs, agricultural training programs, credit and labor saving household technology. The factors which seemed to constrain women farmers' access to production resources include lack of awareness about: (1) the existence and availability of different production resources; (2) the institutions which provide information on the availability or use of the production resources; and (3) insufficient funds to purchase needed production resources even in the absence of the other two constraints.

In decreasing order of influence on women farmers' productivity, the difficulties in accessing the following production resources were ranked 1st to 10th: improved farm tools, credit, agricultural production inputs, labor, transportation, household technology, storage facilities, land, market and agricultural training programs.

The characteristics of women farmers were found to have negligible to low associations with perceived levels of access to production resources. Food crop farmers may have more difficulties accessing production resources than food and cash crop farmers.

English, Kelly Renee. (1987). A profile of female agricultural broadcasters: A national study. Master of Science Thesis, The Ohio State University, Columbus.

Agricultural broadcast journalism is a male-dominated field. Krynski found the typical radio farm broadcaster in Missouri was a man in his 30's who did not grow up on a farm, study agriculture, or leave the station on a news beat. This study was a descriptive census of the female members of the National Association of Farm Broadcasters. The results of a mail questionnaire showed the typical broadcaster in this study grew up on a farm, studied agriculture in college, leaves the office on a news beat and is generally satisfied with her career.

Gibson, Garry L. (1987). Factors associated with the supervised occupational experience programs of Kentucky vocational agriculture seniors. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to identify factors related to the SOE programs of high school students in Kentucky. The factors identified were the selected characteristics of the teacher, the methods used by the instructors in conducting SOE programs, the students' opportunity for an SOE program, the students' level of activity in the FFA, the selected characteristics of the vocational agriculture department, the selected characteristics of the students, and the teachers' perception on training received in conducting SOE programs.

The target population of this study was all of the vocational agriculture instructors and their senior students in regions 5 and 15 of Kentucky.

A significant correlation was found to indicate that higher SOE scores of students were associated with (a) the closer a teacher lived to school, (b) more supervision at fairs and shows, (c) increased number of SOE visits, (d) more classroom instruction spent on SOE, (e) teachers requiring a proportion of the grade to be dependent upon SOE, (f) teachers with a higher percentage of the students with SOE, (g) the student living on a farm, (h) if the family income was dependent upon the farm for income, (i) if the parent encouraged the student's SOE, (j) higher membership status in the FFA, (k) member's perceived activity level in the FFA, (l) the percent of students in FFA at the school, (m) fewer students per teacher, (n) longer teaching contracts, (o) release time available to the teacher during school, (p) the less outside activities required of that teacher by the school other than FFA, (q) reimbursement for travel expenses, (r) the more years that a student has completed in vocational agriculture, (s) if the student's career plans were in agriculture, (t) higher grade point averages of students. No significant relationship existed between the SOE scores of students and the teacher's perception of training received in SOE.

Hedges, L.E. and Straquadine, G. (1987). Perceptions of the competencies of supervising teacher educators as held by new and returning Ohio teachers of vocational agriculture. Staff study. The Ohio State University, Columbus.

The purpose of this study was to determine the effectiveness of the supervising teacher educators in the new and returning teacher program offered by The Ohio State University.

Qualitative data were collected by mail questionnaire. Part I of the study involved teachers who began teaching careers

in 1980, 1981 and 1982 (93 teachers). Part II involved teachers who began teaching in 1983, 1984 and 1985 (60 teachers). Respondents were asked to provide their perceptions of the competency of their supervising teacher educators concerning 33 teacher educator characteristics/competencies. Response rate was 78 percent.

Teachers were grouped as to type of preparation program. Regular program teachers were those who had a B.S. degree and a 4-year provisional teaching certificate. Twenty-four credit hour program teachers were those who had entered teaching directly from business and industry and held a one-year vocational certificate.

Findings of the study included: (1) The 24 hour program teachers perceived the supervising teacher educator's ability to analyze the instructional environment, diagnose problems and prescribe procedures and treatments, as well as the number of visits and use of time during these visits, more favorably than did the regular program teachers. (2) The 1983-85 regular program teachers rated the supervising teacher educators more favorably than did their 1980-82 counterparts in reviewing lesson plan/course of study materials. (3) The 1980-82 regular program teachers rated the teacher educators more favorably than the 1983-85 regular program teachers did in use of time during a visit, conferring with the immediate supervisor, and conferring with students. (4) The study indicated that supervising teacher educators were performing at a satisfactory level of competence in a majority of the 33 specific job responsibilities when supervising beginning teachers of vocational agriculture.

Henderson, J. L. & Cooper, B. E. (1987). A national profile of women agricultural scientists in U. S. land-grant universities. Staff study, Seed Grant from The Ohio State University, Columbus.

A goal of the research was to gather descriptive statistics on women employed as agricultural scientists with academic rank in colleges of agriculture at U. S. Land-grant universities. For purposes of this study, women agricultural scientists were defined as faculty members with academic, tenure-accruing appointments in the following agricultural disciplines: animal science, crop and soil science, agricultural economics/rural sociology, agricultural engineering, natural resources/forestry, biological sciences, horticulture, agricultural and extension education, and food science/animal nutrition.

A representative sample of 215 women scientists was selected to receive a research questionnaire. A total of 157 women scientists returned usable questionnaires for a 73% response rate.

Nine out of ten women faculty have a doctoral degree. Fifty-one percent of the women faculty are assistant professors, 32% are

associate professors, and 16% are full professors. Forty-seven percent of the women indicated that they have tenure and that receiving tenure had taken an average of six years. The women in the responding sample had been in their current position for an average of five years.

The women scientists reported that they spend an average of 32% of their time in teaching responsibilities, 4.% in research activities, 17% in service activities, and 10% in administrative responsibilities.

The women scientists indicated that they are currently conducting an average of three research projects in addition to advising graduate student research and have directed an average of three funded research projects during the past five years.

The women reported that they served on an average of three departmental committees, one college committee, and one university committee.

The average age of the women is 39 years, with a range of 27 to 67 years. Ninety-five percent of the women scientists are white, non-Hispanic. Eighty-one percent of the women earn a salary between $30,000 and $44,999. Sixty percent of the women are married, and 42% have children.

Khumalo, Dickson. (1987). Perceptions of researchers and county extension agents toward selected agricultural research projects in Ohio. Master of Science Thesis, The Ohio State University, Columbus.

The perceptions of research and extension professionals in Ohio were measured for relevancy according to farm-size and basic/applied orientation of forty-five agronomic research projects conducted by the Ohio Agricultural Research and Development Center. The study revealed that nearly 90 percent of the projects were relevant to large-sized farms; over three-fourths were relevant to medium-sized farms; and two-thirds to three-fourths of projects were relevant to small-scale farms in Ohio. The majority of projects were applied research oriented. Years of experience and area of specialty had no influence on respondents' perceptions of research projects.

Knight, J. (1987). Current status of women teachers of vocational agriculture in Ohio and their perceptions of their place in the profession. Staff study. The Ohio State University, Columbus.

The purpose of this study was to answer the following question: What is the current status of women who teach vocational

agriculture in Ohio, and what are their perceptions of their place in the profession?

This was a descriptive study of the women teachers of vocational agriculture in Ohio. Since there were only 43 women teachers at the time of the study, it was determined to include all in the study. The questionnaire which was developed and utilized in this study was reviewed by a panel of experts and field tested. The data analysis includes the basic descriptive statistics but no inferential statistics since the entire population was included in the study.

Thirty-eight (88%) of the 43 women who were teaching vocational agriculture in Ohio at the time of this study responded to the questionnaire. The five non respondents chose not to participate even after two follow-up attempts.

As might be expected, women teachers of vocational agriculture generally reported little or no experience as students of vocational agriculture or as FFA members. They appear to spend time much as male vocational agriculture teachers as reported in other studies. Since most have taught less than five years, they tend to be a relatively young group of people with just over half being married. About 60% are members of the OVATA, but one-half belong to the Ohio Education Association and the parent organization, the National Education Association (NEA).

Nearly all women teachers of vocational agriculture learned about and procured their teaching position through the normal methods. Many, 31% and 29% respectively, reported experience with sexual discrimination and harassment. In this day and age, these kinds of numbers give cause for concern. Many (43%) expressed the traditional concerns faced by all vocational agriculture teachers, but over one-third added concerns that appear to be somewhat unique to women teachers.

Many (60%) want to continue in the profession for the next five years, and about one-third (28%) want to pursue administration or supervision. One-tenth simply want to leave the profession. Nearly all are interested in pursuing advanced education either in agricultural education or other areas of study. From a personal standpoint, slightly over two-thirds have goals related to marriage and family.

Nearly all expressed a need for encouragement for their work as teachers of vocational agriculture. One way of meeting this need is through support groups and networks. This probably explains to a large degree, the strong desire of the respondents to have an annual meeting just for women teachers of vocational agriculture.

Kramic, Jayne Louise. (1987) The level of impact of agricultural information sources on production and marketing decisions of Ohio Farmers. Master of Science Thesis, The Ohio State University, Columbus.

The purpose of the study was to evaluate the level of impact of agricultural information sources on the production and marketing decisions of Ohio farmers. Sources of agricultural information used by Ohio farmers were identified. The perceived importance and the farmers' confidence in the accuracy of each type of information source was determined.

The population studied was Ohio farmers. Questionnaires were mailed to 400 farmers in Ohio. The response rate was 61 percent. Pearson Product Moment correlations were calculated between selected variables. No significant correlations were found. Mean scores and standard deviations were calculated for data from each section of the instrument. Respondents were asked to write in answers to questions concerning the availability and use of selected types of media.

Farmers responded more favorably to certain types of information sources for obtaining information with which to make production and marketing decisions. Farmers considered certain types of information sources as being high in importance. Data also showed that farmers had a higher level of confidence in the accuracy of the information obtained from these sources.

List, Carol Ann. (1987). Attitudes of Ohio Cooperative Extension Service agents toward their evaluation tasks. Master of Science Thesis, The Ohio State University, Columbus.

The major purpose of this study was to describe the attitudes of Ohio Cooperative Extension Service county agents toward their evaluation tasks. An additional purpose of the study was to determine if relationships existed among the study variables of; agent attitude, quality of evaluations, quantity of evaluations, agent evaluation education, and demographic attributes.

Findings of the study indicate that Ohio Cooperative Extension Service county agents held a more favorable than non-favorable attitude toward their evaluation tasks. Agents were found to have conducted evaluations of medium quality with a median of three evaluations being conducted by each agent in 1986. Correlations were conducted for each set of variable pairs and it was concluded that no significant relationships existed between any of these variable pairs.

McCracken, J. David. (1987). Perceptions of rural community leaders about the role of the school in the community. Staff study, The Ohio State University, Columbus.

The major purpose of this study was to describe the perceptions of rural community leaders about interrelationships between the community and the school. Rural schools have been characterized by their small sizes, sometimes depressed economic situations, inability to maintain balanced staffs, and difficulty in offering broad and varied curricula.

Qualitative research methods were used in this descriptive study. Personal interviews were conducted with community leaders in each of four randomly selected rural communities in Ohio. Content analysis techniques were used to summarize the results.

The role of the school in rural communities was found to be very important. The school served as the social center with many community activities revolving around the school. The community depended upon the school for its very existence. Cultural and recreational activities centered around the school. A quote was, "always something going on at the school, most all else is outside the school district." Community leaders felt that they had almost no influence over the curriculum in the schools. Community leaders appreciated the closeness of the school and community, and the fact that teachers were involved with the community. This study confirmed the findings of previous studies concerning the importance of the school, both economically and educationally, within the structure of rural communities.

McCracken, J. David. (1987). Perceptions of vocational agriculture students and teachers about the role of vocational agriculture in rural schools. Staff study, The Ohio State University, Columbus.

The major purpose of this study was to describe the perceptions of vocational agriculture teachers and students about the changing role of vocational agriculture in rural communities. Qualitative research methods were used in this descriptive study. Personal interviews were conducted during 1985 with twelve randomly selected students and the vocational agriculture teacher in each of four randomly selected rural schools in Ohio. Content analysis techniques were used to summarize the results.

Students chose their courses in order to prepare for college, meet school requirements to graduate, have easy courses, follow the advice of the counselor, have a good schedule, and because of no special reason. Individuals advising or assisting students in selecting courses were: guidance counselor, parents, friends, and the vocational agriculture teacher. Over 50% of the students selected vocational agriculture as their favorite subject,

although there was a great deal of variance by school in their response to this question. Students enrolled in vocational agriculture because they lived on a farm, used to live on a farm, it was interesting, learned to do things, get more individual attention, to get out of classes, learn about animals, like to work in shop, learn about jobs, friends taking it, meet lots of people, like the outdoors, aren't lectured to all the time, can participate in things, and like doing things with my hands. About seventeen percent of the students had some difficulty in scheduling vocational agriculture. Teachers indicated that the greatest scheduling conflict was with the college-preparatory curriculum.

Miller, L. E. (1987). Participants and programs: Describing the members of the Ohio Young Farmers Association and the Ohio Young Farmers Wives Association. Hatch funded research report, The Ohio State University, Columbus.

The purpose of this investigation was to describe the members of these two organizations, their perceptions of the effectiveness of the organizations, their perceptions of the improvements needed in the organizations, and the relationships between these characteristics. Survey methodology was employed to gather information from the two populations with appropriate measures taken to control the errors of survey research. A questionnaire was utilized to gather the demographic information, the five areas of the effectiveness domain, and the three areas of the improvements needed domain. Likert-type scaling was used for the latter two domains. A total of 240 usable questionnaires were returned with 114 (36%) from OYFA and 126 (56%) from OYFWA members. Descriptive, correlational and inferential statistics were used in the data analysis.

The members were in general agreement with a positive perception of the effectiveness of the organizations in each of the five areas. Further, they perceived few improvements needed and tended not to support alternative delivery systems. The members tended to be approaching the upper limit of the age category for active participation (35 in Ohio) for the organizations. Over one-half of the members of each organization reported some formal education beyond high school. Off-farm employment was reported by 44% of the OYFWA members. Twenty percent of the OYFA members who worked off-farm were engaged in non-agricultural occupations. About 40% farmed 600 or more acres and 12% under 100 acres. Nearly 40% of the OYFA members had not had vocational agriculture in high school, but nearly 80% of both groups had been in 4-H. Members reported that they called upon the vocational teacher only twice per year for information and that the information was "somewhat valuable". Magazines continued to be the leading source of information. Correlations between the characteristics and the domains

were low to negligible. The researcher implied that a comparative study with those young farmers not in the organizations should be conducted to determine how their needs may differ and what type of programming would meet their needs.

Milliser, Kenneth Eugene, Jr. (1987). Factors associated with the decision of first-year 4-H advisors to discontinue after one year of service. Masters of Science Thesis, The Ohio State University, Columbus.

The purpose of this study was to test a model of suggested factors related to the decision of first-year 4-H advisors to drop out of volunteer programs. A mailed questionnaire was distributed to selected 4-H advisors in Ohio who were classified as active or non-active for a second year of service as of 1985.

Chi square or t-test comparisons were run between groups, and a stepwise discriminant analysis was performed to ascertain the best predictor of the dependent variable, turnover.

The best predictors were: 1. commitment, 2. expected to do but did not-affect, 3. expectations-overall evaluation, 4. Satisfaction, 5. Situational/Climate, 6. No idea would do-affect, 7. First experience at 4-H, as they accounted for 40 percent of the variance in turnover.

Newcomb, L. H. & Trefz, Marilyn K. (1987). Levels of cognition of student tests and assignments in the College of Agriculture at The Ohio State University. Staff Study, The Ohio State University, Columbus.

This study determined how the levels of cognitive behavior involved in student examinations and assignments can be measured and to what extent testing and assignment practices require students to perform at each level of cognition. The investigation also examined faculty members' perceptions of their own cognitive levels of instruction and testing methods as well as the student's ratings of the cognitive levels of tests and assignments.

A purposeful sample of 22 teaching faculty was drawn, representative of each department within the College of Agriculture. Based upon Bloom's Taxonomy of Educational Objectives, the researchers developed a taxonomy that classified cognition into the four levels: Remembering, Processing, Creating (synthesis) and Evaluation. Data were collected through review of the tests and assignments by the research staff and course instructors in order to assure agreement on the classification of each item. Follow-up interviews were conducted to receive participants' reaction to the assessment results. Students were asked to determine the percentage of activities they felt occurred at each cog-

nitive level in the course tests and assignments.

The distribution of learning across the levels of cognition for all participants in the study found 37% of the learning was at the remembering level, 44% at the processing level, 6% at the creating level and 13% at the evaluating level. Within the lower division courses 54% was at the remembering level, 39% at the processing level, 2% at the creating level and 5% at the evaluating level. For the upper division courses, remembering was 29%, processing was 51%, and creating and evaluation at 10% each. Out of course activities (i.e. homework assignments, laboratory exercises, term papers) were categorized at the higher cognitive levels. Creating and evaluating were identified as 14% and 18% of activities as compared to only 4% and 8% for tests and quizzes.

Student's perceptions of the cognitive levels rated less remembering and processing and more creating and evaluating level work than did the professors of the courses.

Newman, M. E. and Warmbrod, J. R. (1986). Educational reform: The influence of enrollment in vocational agriculture on admission to a college of agriculture. Staff study, The Ohio State University, Columbus.

The purpose of the research was to describe how the conditional/unconditional admissions policy, implemented at The Ohio State University in 1984, influences the academic qualifications of students entering the College of Agriculture and to explore the extent to which enrollment in vocational agriculture in high school impedes or enhances high school students in completing the recommended college preparatory curriculum.

Data were collected from the entire populations of students entering the College of Agriculture during autumn quarters 1982 (n = 180), 1983 (n = 141), 1984 (n = 186), and 1985 (n = 166). Data were collected from official university records.

The conditional/unconditional admissions policy has been accompanied by changing patterns of high school courses completed by students entering the College of Agriculture. During the period 1982-83 to 1985-86, a higher percentage of entering students (12% in 1982; 56% in 1985) completed the 15 prescribed units of high school preparatory courses. This trend also holds for the percentages of entering students who completed the prescribed number of units in English, mathematics, science, social science, foreign language, and visual and performing arts. New first-quarter freshmen ranked higher in their high school graduating class and achieved higher scores on ACT tests in 1985 than in 1982.

The trends described above hold both for students who studied vocational agriculture in high school as well as for students who did not enroll in vocational agriculture. The percentage of new

first-quarter freshmen in the College of Agriculture who had studied vocational agriculture increased from 49% in 1982 to 61% in 1985. The data indicate that enrollment in vocational agriculture does not prevent students from completing a college preparatory curriculum; however, students who enroll in vocational agriculture are less likely to complete a college preparatory curriculum than students who do not enroll in vocational agriculture.

O'Neal, Steven Carl. (1987). Employers' perceptions of technical and non-technical skills needed by horticultural employees. Master of Science Thesis, The Ohio State University, Columbus.

The purpose of this study was to determine employers' perceptions of the importance of technical and non-technical skills needed by horticultural employees. The design for this study was descriptive survey. Horticultural employers in Ohio were the target population for the study. Sixty-one percent of the employers felt that communication skills were more important when compared to technical skills for their employees. The importance of oral communications was evident when only 24% of the employers felt that horticultural skills were more important when compared with speaking and listening skills. The data suggest the importance of communication skills, particularly verbal skills for horticultural employees.

Powell, Ronald Lee. (1986). Development and evaluation of a microcomputer-managed sequenced course outline. Ph.D. dissertation, The Ohio State University, Columbus.

The lack of utilization of the microcomputer as an instructional aid by the vocational agriculture teachers to increase their efficiency has not been due to the deficiency of available data bases and/or microcomputer availability. Vocational agriculture teachers have not had task lists, reference lists or other resources available to them that are computerized. Without the computerization of these data bases for the vocational agriculture teacher, the microcomputer cannot be utilized as an instructional aid in developing sequenced course outlines and/or courses of study.

This study was experimental research of a developmental nature. The design used was similar to the pretest posttest control group design. An intact group of students enrolled in Instructional Program Planning for Vocational Agriculture were randomly selected and assigned to the two levels of the independent variable. The active independent variable was the method by which the subjects developed a sequenced outline. The two levels

of the independent variable were: (a) development of a sequenced course outline by traditional methods and (b) development of a sequenced course outline by a microcomputer-managed sequenced course outline program. The method by which the sequenced course outline was developed represented the only difference between the levels in the study.

The results obtained indicated: (a) the program had utility as perceived by the experimental group and a panel of computer experts, (b) no statistical differences were found between the control group and the experimental group on any of the variables regarding time,(c) the panel of experts rated the completed sequenced course outlines higher on criteria one through nine for the control group. Criteria one through five were statements about the content (number, selection, and sequencing of problem areas) of the documents. Criteria six through ten were statements about the format (margins, cover page, readability, etc.) of the documents.

Based on the findings of this study, (a) the microcomputer-managed sequenced course outline program was operational and preformed at a specified level, (b) the subjects and faculty panel agreed that the software program had utility, (c) the microcomputer-managed program did not statistically reduce the amount of time to develop a sequenced course outline, (d) subjects who developed a sequenced course outline by traditional methods had documents rated significantly higher on content and format quality, and (e) the potential to improve the efficiency of developing a sequenced course outline with a microcomputer-managed sequenced course outline program is feasible.

Smith, Keith L. (1987). Dynamics of change: Helping extension professionals find the answer. Staff study. The Ohio State University, Columbus.

Traditionally, Extension personnel have helped clientele deal with change. However, due to recent cutbacks and feelings of instability in the Extension Service, agents themselves have been faced with change which could significantly hamper their ability to help clientele.

Is it the responsibility of the Cooperative Extension Service to help its professional staff understand the dynamics of change? If it is, what is the best way Extension can meet this challenge? By designing an in-service program to help its professional staff deal with transitions in their lives, the Ohio Cooperative Extension Service (OCES) has made progress toward this goal.

The program titled, "Dealing with Transitons in the Job and Your Personal Life," was developed for a County Chair workshop. Dr. Chuck Lofy, of the Wellness Center of Minnesota, and Gail

Gunderson, North Dakota Cooperative Extension Service, were selected as resource persons.

Response rate to mailed questionnaires: 74% employees; 77% spouses. Respondents agreed or strongly agreed that: 1. 82%--objectives achieved at a higher rate because spouses were invited. 2. 68%--employees were more receptive because spouses were invited. 3. 63%--workshop was more successful because all expenses were paid. 4. 73%--the delivery process of the workshop was appropriate. 5. 80%--examples used to describe change and wellness process appropriate. 6. 64%--the workshop helped participants to help others through change. 7. 68%--workshop helped participants to help others through change. 8. 71%--important to explore what's happening in their own lives. 9. 71%--important to know extension's impact on their families' lives.

OCES is planning to offer similar workshops dealing with change to other interested extension employees and their spouses. Since two-thirds of the county administrators and their spouses indicated that they are now better able to deal with change in their own lives and are better able to help others do the same, money should not be a limiting factor, even in this time of budgetary restraint. The positive response to this program is helping OCES rethink the structure of in-service offerings in general.

Straquadine, Gary Samuel. (1987). Vocational agriculture program quality and factors related to program quality. Ph.D. Dissertation, The Ohio State University, Columbus.

The major focus of this study was to describe vocational agriculture program quality as perceived by the vocational agriculture teacher. The investigation sought to identify variables that are related to program quality and to determine the proportion of variance in program quality explained by these variables. The variables selected for examination in relation to program quality included structure of state level supervision in agricultural education, teacher attributes, school agricultural characteristics, and level of financial support for the vocational agriculture program.

From a target population of 11,775 secondary vocational agriculture teachers, a sample of 567 was randomly drawn with a 69.1% response rate achieved. The dependent variable was program quality as measured by an instrument based upon the Standards for Quality Programs in Agriculture/Agribusiness Education. Utilizing Cronbach's Alpha, instrument reliability ranged from .47 for the domain student recruitment, enrollment and counseling to .87 for the domain public relations.

The major findings of this investigation was that the vocational agriculture teachers perceived a high level of program quality. A low positive degree of association was found between program quality and years of teaching experience, number of teachers in the department, number of students in the program, number of students in the high school, percent of urban students enrolled in the program, percent of the school day spent as a teacher of vocational agriculture, adjusted annual salary, and the amount of dollars for program support. In addition, a low negative association was found between program quality and the type of responsibility for adult education in agriculture and institute granting highest degree.

The duties of the state supervisor, the heirarchy of state supervision and the structure of state supervision were not related to program quality. Program quality was found not to be related to the vocational agriculture teacher's college major, level of educational achievement, recentness of graduation, the type of school where the program was located and the percent of rural and suburban students.

Approximately 19% of the variance in program quality is attributed to the linear combination of the adjusted salary of the teacher, the amount of dollars available for program support, number of teachers in the department, and the type of responsibility for adult education in agriculture.

Tucker, Mark Alan. (1987). How Ohio State agricultural alumni view OHIO 21: An assessment of publication preference, readability and audience. Master of Science Thesis, The Ohio State University, Columbus.

The study involved a readership survey of OHIO 21, a new semi-annual magazine of The Ohio State University College of Agriculture. Data were gathered from Ohio State agricultural alumni by mailed questionnaires. Results showed that respondents generally believed the publication was an understandable and believable source of agricultural information. Topics of most interest to respondents included university agricultural research, new agricultural products, and economics. It was recommended that OHIO 21 editors continue to focus heavily on university research but also cover a variety of related agricultural areas using relatively short story lengths and non-university sources where appropriate.

Warmbrod, J.R. and Doerfert, D. L. (1987) The college preparatory curriculum and academic performance in college: How does vocational agriculture fit into the picture? Staff study, The Ohio State University, Columbus.

The purpose of the research was to investigate the relationship between academic performance of students in a college of agriculture and the extent to which they had completed a college preparatory curriculum in high school. Also investigated was how enrollment in vocational agriculture in high school impacts upon the relationship between the completion of a college preparatory curriculum and academic achievement in college.

Data were analyzed for two populations of new first-quarter freshmen entering the College of Agriculture at The Ohio State University during the 1981 (n = 134) and 1982 (n = 169) autumn quarters, who at the time of graduating or leaving, were enrolled in the College. Data were obtained from transcripts and official documents in the Office of Admissions. Discriminant analysis and multiple regression were used to analyze data.

For students who entered in 1981, those who completed a college preparatory curriculum in high school did not have either a significantly higher total cumulative grade point average or grade point average in agriculture courses, when class rank percentile and ACT score are controlled, than students who do not complete the college preparatory curriculum. For students who entered in 1982, students who completed the college preparatory curriculum performed academically at a significantly higher level than students who had not completed the college preparatory courses. Class rank percentile and ACT score are more potent in explaining achievement in college than is the type of curriculum completed.

Students who enroll in vocational agriculture in high school (1) are less likely to complete a college preparatory curriculum than students who do not enroll in vocational agriculture, (2) are just as likely to graduate from college as students who do not enroll in vocational agriculture, and (3) perform just as well academically in college as students who do not enroll in vocational agriculture.

Al-Kafagy, A.A.M. (1985). Strategies to enhance productive relationships between extension personnel and university faculty in developing nations. Doctoral Dissertation, Oklahoma State University, Stillwater.

The central purpose of the study was to determine perceptions regarding the relative effectiveness of selected strategies which may enhance the preparation of agricultural extension workers in developing nations. These perceptions were limited to two groups: (1) personnel in national agricultural extension programs and (2) administrators and faculty responsible for preparatory training in extension located in an institution of higher education. Perceptions to be determined were centered on the nature and extent of mutual concern and involvement for each strategy or practice and sought responses as to the extent it (1) currently existed and (2) was desirable for the future. A listing of 13 strategies developed by jury technique was submitted by questionnaire form seeking responses from personnel in six developing nations. Percentages of returns ranged from 50 to 100 percent.

University faculty identified five of the practices as "not used," while extension personnel identified only two as not being used. It is notable that several of the items identified by faculty as "not used" were those which might call for more initiative effort on the part of extension personnel. When identification and categorization with regard to the extent of desirability of the practices were concerned, it was found that the extent of the agreement between the two groups was much more pronounced. While extension personnel identified four practices as "highly desirable," their counterparts at the university recognized six practices as being "highly desirable." Extension personnel categorized nine practices as being "very desirable" as compared to faculty categorization of seven. It was concluded that each of the thirteen selected strategies or practices which were identified by "jury" technique was valid since most all respondents classified them as either "very desirable" or "highly desirable." Among those listed by both groups as "highly desirable" were: (1) a period of practical field experience be a part of the college course and (2) results of university research be made available to extension workers on a systematic basis.

Barnett, W.G. (1987). Perceptions of curriculum and skills to be taught to eighth grade students of vocational agriculture in Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to collect and analyze the perceptions of curriculum and skills to be taught to eighth grade students of Vocational Agriculture in Oklahoma. The study sought perceptions of Oklahoma Vocational Agriculture teachers, Oklahoma State Department of Vocational and Technical Education personnel, and Oklahoma State University Agricultural Education staff as to the importance of instructional areas and units of instruction within each instructional area. These findings were used as the basis for recommendations of topics which should be included in an Eighth Grade Curriculum for Vocational Agriculture.

The respondents to a mailed questionnaire consisted of 124 purposely sampled Vocational Agriculture teachers, five Oklahoma State Department of Vocational and Technical Education personnel, and three Oklahoma State University Agricultural Education staff representing a 67 percent return.

Results from this study were reported according to the objectives of the study. Only medium to small schools will have Vocational Agriculture for eighth graders and these students will comprise an important component of Vocational Agriculture. There is a special need for an eighth grade curriculum to be developed with a wide range of general information to be included in the units of instruction from instructional areas. Also, instructional areas should be emphasized in the following order: Vocational Agriculture, Leadership, and Careers; Farm Management; Animal Science; Agricultural Mechanics; and Plant and Soil Science. Only those units of instruction which received average mean importance ratings very near or above the overall mean for each major instructional area should be included in the eighth grade curriculum.

Black, R.L. (1987). Job satisfaction/dissatisfaction of county cooperative extension 4-H agents in Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The intent of this study was to determine perceived job satisfaction/dissatisfaction of county cooperative extension 4-H agents in Oklahoma based upon selected criteria. The 116 respondents (100%) were county agents with 4-H responsibilities in Oklahoma. The 4-H agents were asked to respond to the questions of the job satisfaction/dissatisfaction criteria pertaining to their job. The questions were developed from specific factors that are related to the county extension agents' profession, more specifically, those factors associated with job satisfaction/ dissatisfaction. A four point Likert scale of categories was used to allow the agents to rate their degree of satisfaction/ dissatisfaction relative to each of the questions.

Analysis indicated 4-H agents were generally satisfied in their present position. Although the writer concluded that the respondents were generally satisfied, the writer further concluded there were three areas of dissatisfaction: (1) the salary they receive; (2) assignments not related to their job; and (3) dissatisfaction with Cooperative Extension administration. The writer suggests that these three areas of dissatisfaction be further studied based upon the findings from this study, to identify the specific areas of dissatisfaction which the county cooperative extension 4-H agents revealed.

Casey, G.R. (1987). Criteria and components of an alternate national FFA membership structure. Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of the study was to collect and analyze the opinions and perceptions of state staff in vocational agriculture education, vocational agriculture teachers/FFA advisers, and teacher educators in agriculture concerning an alternate membership structure for the Future Farmers of America. This nationwide membership structure for the FFA developed from an existing model and the respondents' opinions, suggestions and comments gathered from two survey instruments.

The study surveyed 184 participants utilizing a modified Delphi Technique. One hundred forty-one and 124 persons, respectively, responded to the two rounds of the study. The final membership model, based on the consensus of the groups' recommendations, state education codes and federal mandates, was forwarded to the National FFA Organization for their review and action.

The findings established the criteria necessary for consideration of a non-dues structure. These were that the FFA is integral to vocational agriculture, that all students have potential leadership capabilities, that charging dues for integral activities is inappropriate, and that there are certain materials considered essential for students and chapters. Based on the findings, it was concluded that the following are components of an alternate membership structure which should entitle students to participate in any integral activity conducted by chapters, state associations and/or the national organization: membership by virtue of enrollment at the local level, and membership at state and national levels by the vocational agriculture departments' purchases of appropriate leadership development materials from state associations and the national organization.

It was recommended that the FFA should remain integral to vocational agriculture and that no fees should be assessed students which could create barriers to their participation in leadership development activities of the organization. It was also recommended

that leadership development materials for students and chapters be made available for purchase from sources other than dues so the FFA could adopt a non-dues structure.

Cooper, D.E. (1987). Competency levels of pre-service training received by county cooperative extension service agriculture agents in Oklahoma relative to light horses. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the County Cooperative Extension Service Agriculture Agent's in Oklahoma degree of competency relative to light horses. A further purpose of this study was to determine the pre-service experiences relative to light horses. A questionnaire was mailed to the 69 of which 55 (80.0 percent) completed and returned the questionnaires included in this study. The questionnaire consisted of forced choice responses and a Likert Scale to determine the competency levels.

Results of this study were reported according to the objectives of the study. Agriculture agents who responded to the survey can be characterized as having the M.S. degree or above and have been employed as county cooperative extension service agriculture agents 11 years or more. Furthermore, the agriculture agents were not above average concerning their competencies in the following areas: light horse orientation; selection and judging; health and foot care; nutrition; reproduction; facilities and management; and training light horses. Agriculture agents have received little, if any, formal education relating to the light horse but have gained pre-service experiences by attending special programs such as cooperative extension service programs, clinics, workshops, in-service training, and breed programs. A large majority of the agriculture agents did not train horse judging teams while a majority were or had been horse owners.

Dennis, J.G. (1987). The current status and utilization of FFA school farms in southwest Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to investigate the current status and utilization of FFA school farms in the Southwest district of Oklahoma. Survey instruments were distributed to teachers in 79 Vo-Ag programs during professional development meetings. The 28 item questionnaire was administered during the Spring of 1987. The format of the instrument was for forced type responses, designed to collect both niminal and ordinal data. The select areas addressed were demographics, parental involvement, maintenance, emphasis, limitations, major problems, and benefits to students. Frequency

distributions, percentages, and rank ordering were the descriptive statistics utilized to analyze and treat the data.

Fifty-five teachers participated in this study, however, only 45 conducted school farms with their Vo-Ag programs. These 45 teachers represented 21 single and 14 multiple teacher departments. The largest number of respondents (17-33.78 percent), major emphasis of the school farms had five years or less teaching experience. The major emphasis of the school farms was for livestock. Most of the school farms were five acres or less in size. The annual budget for the largest group of school farms was reported to range for $501 to $1000 per year. Over 86 percent of the teachers indicated that student SOE programs were the ideal use for school farms. Apparently finances and the annual budget were major limitations for school farms; however, most were able to continue providing facilities in good operating conditions. Evidently, there was a lack of parental supervision of SOE programs. The opportunities afforded by school farms proved a definite asset to the students' SOE programs. Other opportunities with regard to school farm use and emphasis should be considered. Local school districts should address the financial need of school farms more closely.

Gallatin, L.D. (1987). Science objectives included in the Oklahoma vocational agriculture curriculum as compared to the suggested learner outcomes for high school science courses in Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to identify the science objectives found in the basic core curriculum for Vocational Agriculture in Oklahoma, and to compare the Vocational Agriculture objectives to those science objectives identified in the Suggested Learner Outcomes: Science (1985), as prescribed for instruction in high schools in Oklahoma. Objectives which appeared to be science concepts included in the Oklahoma Core Curriculum Vocational Agriculture I through IV and Agricultural Mechanics I were listed. A committee then rated the selected objectives and validated those that related to science objectives. They selected and categorized each Vocational Agriculture objective that related to one or more of the seven science areas into categories: (1) General Science, (2) Biology I and II, (3) Chemistry I and II, (4) Botany, (5) Zoology, (6) Physiology and Anatomy, and (7) Physics. The group of experts was made up of five of the original validators, the State Department of Education used to validate the science objectives found in the Suggested Learner Outcomes: Science for public high schools published in 1985.

The findings indicated that 80.9 percent of Vocational Agriculture I through IV and Agricultural Mechanics I selected objectives were validated as science related in Biology I and II and

78.03 percent in General Science. Vocational Agriculture I, Vocational Agriculture II and Vocational Agriculture III courses were found to be highest in science objectives in the seven component areas. Vocational Agriculture IV, with 15 selected objectives, had 15 validated as science related in General Science and Botany as well as 14 validated in Biology I and II and Chemistry I and II component areas. One hundred percent of the Agricultural Mechanics I objectives were validated in the General Science and the Physics component areas by the validators. It is recommended that the Vocational Agriculture Core Curriculum be reevaluated by the State Department of Education for increased science credits based on the findings of this study. Secondly, it is recommended that this study be followed by a mathematics study and studies identifying those science and math objectives taught in the Vocational Agriculture courses in Oklahoma high schools.

Gorczyca, J.T. (1987). Job satisfaction of vocational agriculture teachers in central Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the level of job satisfaction among vocational agriculture teachers in the Central District. Survey instruments were administered to 90 Central District teachers of vocational agriculture during each of their professional improvement groups in early February, 1987. Eighty-six (95.56 percent) of 90 teachers completing questionnaires participated in the study. The format of the 19 item survey instrument included a five-point "Likert-type" scale for teachers to indicate their responses. The selected categories addressed in the instrument were job satisfaction, salary implementation, relationship and personal contact with principals, the work schedule, teaching as a profession, utilization of advisory committees, and student behavior. The sampling statistics utilized to derive the data in this study were weighted means, frequency distributions, and percentages.

An overwhelming majority of Central District teachers seemed to be happy in their present job situations. However, more than 42 percent indicated that was probably a more equable and fair method of implementing salary increases, while over 85 percent of the respondents indicated they appreciated the manner in which they could discuss school problems with their principals. Over two-thirds of the teachers stated they were at least in the "satisfaction" group regarding their daily work schedules. Student behavior was not a problem for the large majority of respondents in the Central District. In addition, Central District teachers were not willing to change jobs for potential pay increases in other career areas. There seems to be an attitude of trust among

vocational agriculture teachers and principals in the Central district. Student behavior seems to have little bearing on the overall job satisfaction of Central District teachers. Positive relationships among teachers and administrators should be encouraged and promoted. Supervisors, teacher educators and administrators should more thoroughly explain the benefits of utilizing advisory committees. A study should be conducted to compare job satisfaction among teachers with their perceived job performance.

Harp, R.K. (1986). Perceptions of selected Oklahoma vocational agriculture teachers as to the format and design changes made in the 1984 revision of vocational agriculture I instructional materials. Masters Thesis, Oklahoma State University, Stillwater.

The major purpose of this study was to determine perceptions of selected Oklahoma vocational agriculture teachers as to the format and design changes made in the 1984 revision of the Vocational Agriculture I instructional materials. The date to determine these perceptions were collected by administering a questionnaire containing statements about the changes. The teachers were asked to respond to the statements by choosing a number on a 10 point scale expressing their degree of agreement or disagreement with the statement.

It was found that in all cases, the teachers agreed with the changes. The teachers were most strongly in favor of the transparency masters and their respective changes. Their perceptions were expressed next most positively toward the increased number of assignment sheets and then followed by the addition of supplements in the units of instruction. Moreover, teachers stated that the changes made in the 1984 Vocational Agriculture I materials should be continued in the revision of other vocational agriculture materials.

Harper, W.R. (1986). The effects of the ten-day rule on FFA chapters and members in the state of Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

This study was conducted in order to determine the effects of the Ten-Day Ruling on FFA chapters and members in the state of Oklahoma. Objectives of this study were to determine what effect the ruling has had on FFA membership, to determine what effect the ruling had on FFA members' SOEP, to determine what effect the ruling had on FFA members' participation in interscholastic contests, to determine what effect the ruling had on other leadership activities on the state and national level, and to determine what effect the ruling had on FFA members' participation in livestock exhibitions.

Information used to compile this study was gathered by the response of 101 out of 120 FFA advisors to a questionnaire for a response rate of 84.2 percent.

As a result of conducting this study, it can be concluded that the Ten-Day Ruling has caused a decrease in the attendance of interscholastic judging contests, a decrease in the number of FFA members attending livestock exhibitions, and a decrease in the number of livestock exhibitions that FFA chapters attend. All other areas investigated by this study were only slightly affected.

Harritt, G.G. (1987). Perceptions of Vocational Agriculture teachers and county extension agents as to the importance and feasibility of alternative approaches to farming in southeast Oklahoma. Doctoral Dissertation, Oklahoma State University, Stillwater.

This study surveyed the perceptions of vocational agriculture teachers and county agriculture extension agents about the feasibility and importance of alternatives in agriculture which could be adopted by farmers and ranchers to help raise their economic level. The study also surveyed the teachers and agents about their needs for research and resources to aid dissemination of the alternatives to adults and youth. The survey used a modified delphi technique consisting of one round to solicit possible alternatives and a second round to rate the alternatives as to importance and feasibility.

The vocational agriculture teachers and county agriculture extension agents primarily emphasized alternatives in management, marketing, and record keeping for adults and youth. Pasture, forage and livestock management alternatives rated high importance. Horticulture marketing alternatives rated important. Methods recommended for disseminating the alternative approaches were examples, demonstrations, teaching decision making, and individual contact. Teachers and agents need to develop educational programs on farm management.

Howell, J.W. (1987). Perceptions of teacher attitudes toward students and related classes in the CVET program. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the perceptions of CVET teachers with regard to student abilities and importance of CVET and related academic programs. Survey instruments were personally administered to 45 teachers in 32 CVET programs during the spring of 1986 at the respective professional improvement meetings conducted in Antlers, Muskogee and Tulsa. The format of

the 20 item survey consisted of forced response questions on a five-point interval scale. The selected factors addressed in the survey instrument were the teachers' perceptions of student abilities, facilities and equipment, classroom instruction and equipment, relationships with academic teachers and program improvement. Weighted mean responses, derived from each of the 20 statements, frequency distributions and percentages were the sampling statistics used to describe the data.

Differences in levels of agreement ranged from "strongly agree" for student motivation on actual jobs and the CVET teachers' involvement in student placement to "disagree" concerning the counselors' knowledge of CVET student placement. In general terms, the typical CVET teacher was 38 years of age, had 12 years of teaching experience, and six years of experience in teaching disadvantaged students. A major finding of the study was that 98% of the teachers revealed that students were easier to motivate when working on actual jobs as opposed to simulated projects or classroom instruction. All CVET teachers either "agreed" or "strongly agreed" that they should be involved in the placement of students in CVET programs. It was concluded that cooperation between CVET teachers and academic teachers was necessary to more adequately meet the needs of disadvantaged students.

Hunter, S.K. (1987). Vocational agricultural teachers perceptions of agricultural mechanics and agricultural management competencies of students in the vocational agricultural science program in Texas. Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of this study was to collect and analyze the perceptions of Texas vocational agriculture teachers as to the importance of student competencies taught in the agricultural mechanics and agricultural management part of the Texas vocational agriculture curriculum. The study sought to find if there was a difference in the perceptions of teachers in single teacher departments as compared to those in multiple teacher departments. A difference was also looked at between seven groups depicting years of teaching experience in five year intervals. The population consisted of 1236 Texas vocational agriculture teachers. These teachers were systematically randomly selected into seven groups, each group was given a different questionnaire dealing with competencies in agricultural mechanics or agricultural management.

The majority of the vocational agriculture teachers perceived the competencies in both agricultural mechanics and agricultural management as being of high importance. There were no competencies that received a total group mean score below the level of medium importance. There were some statistically significant differences

found between the single and multiple teacher departments, and between the years of experience groups.

Imbia, S.I. (1987). A study of Cameroon agricultural education priority issues. Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of this study was to identify Cameroon agricultural education priority issues as perceived by agricultural education students and teachers at the Cameroon University Center at Dchang and Cameroonians studying agriculture in the United States and to determine any differences in perceptions on the issues between the groups.

A list of 21 agricultural education priority issues was developed from the Cameroon fifth 5 year development plan into an instrument format. Using a Likert scale, the issues were rated by 212 students and seven teachers at the Dchang University Center and 26 Cameroonians studying agriculture in the United States.

Means, mean of means, standard deviations and "t" statistics were calculated to analyze the data.

This study revealed that "construction of a network of roads to all food production areas, reorganization of how agricultural credits (bank loans) are distributed, training agricultural education teachers and agents, improving small farm productivity through rural training centers, intensification of local food crop research, reorganization of how agricultural inputs are distributed, a critical review of Cameroon agricultural education curriculum in all agricultural institution, and improving small farm productivity by improving the local farming systems through research" were the priority issues on Cameroon agricultural education development in that rank order.

"Introduction of advance technology (tractors) to local farmers, creation of a presidential commission to look into agricultural education problems, and a review of agricultural education clientele in the country" were the least important issues.

Larman, G.B. (1987). The perceived training needs of vocational agriculture teachers with five years or less teaching experience conducting young/adult farmer education programs in the western one-half of Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the perceptions of vocational agriculture teachers with five years or less teaching experience who were conducting young/adult farmer programs in the western one-half of Oklahoma. Fifty-one (58 percent) of the 89

teachers in the Central, Southwest, and Northwest districts with five years or less teaching experience participated in the study. The teachers provided responses concerning eight major selected competency areas regarding their perception of the importance of the competency skills, quality of preservice education, and inservice training needs. A six point interval scale was utilized to ascertain the teachers' responses concerning the 58 item survey. Frequency distributions and percentages were the descriptive statistics utilized to analyze the data.

While the Central District had the largest number of teachers conducting young/adult farmer education programs, more of the district's teachers also taught in multiple teacher departments. The importance of the selected competency areas with regard to teaching/conducting young/adult farmer education programs overall, were rated as being "moderately important", while the teachers seemed to perceive their undergraduate training as being "average" and their perceptions of future training needs for inservice training fell mostly into the "moderate" category. While record keeping was the highest rated item with regard to importance of all the skill areas, animal nutrition was rated as being higher in quality with regard to undergraduate training, and skills concerning embryo transplants seemed garnered the most notoriety for inservice training. It was concluded that conducting/teaching young/adult farmer programs did not merit the emphasis of other pre-professional education areas. It was recommended that future teachers be made aware of the benefits and opportunities available as a result of conducting young/adult farmer education programs.

Merrill, H.W. (1987). Perceptions of nursery/pesticide retailers concerning urban integrated pest management in metropolitan Oklahoma City. Masters Thesis, Oklahoma state University, Stillwater.

The main purpose of the study was to determine the perceptions of nursery/pesticide retail businesses in the Oklahoma City metropolitan area toward implementing an urban integrated pest management program. The survey population consisted of the owner/manager and one salesperson from 46 businesses. Potential businesses were selected from existing lists of licensed retailers and finally selected based upon the following criteria. Both growing plants and pesticides must have been retailed and the combined sales of these two groups of commodities must have accounted for at least fifty percent of the business's gross income. Survey data was collected using a telephone interview.

The major findings of the study are: the majority of the businesses interviewed provided some form of training for employees, and would participate in an urban IPM program, including employee training and on-site field days. The Oklahoma State University

Cooperative Extension service personnel and literature was widely used for reference in the areas of pest identification and pest control recommendations. Various sales and training aids, provided by the urban IPM program, would be of use to the majority of businesses interviewed, however, a computer accessed help line would not be useful. Training programs developed for employees of cooperating businesses should concentrate in the areas of pesticide effectiveness and pest identification.

Shumaker, C.G. (1987). Identification of factors influencing previous teachers of vocational agriculture to return to the profession. Masters Thesis, Oklahoma State University, Stillwater.

The major purpose of this study was to determine and analyze factors which influence teachers of vocational agriculture to return to the teaching profession. Data were collected by administering a questionnaire to Oklahoma vocational agriculture teachers who have returned to the teaching field from July 1, 1978 to June 30, 1986. Respondents reacted to categories of questions which asked for reasons they returned. The four major categories were (1) Monetary and Security; (2) Family Situation; (3) Teaching Situation; and (4) Future Farmers of America and Adult Farmers.

The outcomes of the analysis showed that (1) "satisfaction of helping students succeed" was the highest rated of all influencing factors returning teachers chose for their reason to return; (2) the highest rated sources of influence to returning teachers appear to deal with the teacher/student relationship; (3) factors which rate low on the scale of sources influencing teachers to return, appear to deal with an environment outside of the teachers' "normal" realm of duties, two weeks paid vacation, additional income from conducting young and adult farmer classes, etc.; (4) upon leaving the teaching field, teachers tend to choose a wide variety of occupations; (5) in regard to the number of years out of the profession, 69 percent of returning teachers returned within the first three years; (6) a large number of returning teachers (94 percent) indicated they would remain a vocational agriculture teacher in the coming years.

Stone, D.T. (1987). An assessment of the parks and nursery management technician program at Eastern Oklahoma State College. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the effectiveness of the Parks and Nursery Management Technician program at Eastern Oklahoma State College (EOSC) as perceived by the graduates and their employers. The population of this study consisted of

graduates and all of their employers in related fields. Data was obtained through 15 mailed questionnaires which were returned and phone calls to graduates and their employers.

Areas needing more emphasis in the curriculum are Communications, Plant Insect and Disease Control, Personnel, Parks and Recreation Concepts, and Surveying. Personnel and Surveying need to be more related to actual field experience. Plant Identification is the only skill where the graduate was ranked above average by the employers. Plant Insect and Disease Control was recognized as the skill least mastered by the graduates. EOSC is credited as a major source of skill attainment for the 12 skill areas except for the areas of communication and personnel.

Todd, L.A. (1986). Sources and availability of farm credit in a three county area of north central Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The sources and availability of agricultural credit merit a great deal of concern for agriculture producers whose survival is at state. Lending agencies with agriculture portfolios in Alfalfa, Major and Woods counties were identified and their common characteristics determined.

Seventeen of 19 (89.47%) agricultural lending agencies in a three county area of North Central Oklahoma returned usable survey instruments. Almost 65 percent of the lending firms provided real estate loan opportunities to their clientele, 94 percent provided funds for farm operations, while 76.5 percent made loans available for equipment purchases. Loan data indicates that the common interest rate for both real estate and operating loans was 12 percent, while most equipment loans were in the 13 to 14 percent area. All of the respondents indicated that they had made loans to high school vo-ag/FFA students. The most frequent answers by respondents to the question of agriculture's most pressing problem were: suppressed market prices, repayment and cash flow problems, and depressed real estate values. Respondents indicated that the most common reasons cited for loan denial were inadequate cash flow and lack of a successful "track" record. Repayment schedules most frequently utilized were annual and semi-annual payments. Agricultural lending agencies in the three county area of North Central Oklahoma do not require their clientele to participate in educational programs. Staff meetings among loan officers of responding agricultural lending agencies are on an "as needed" basis. Lenders, Extension Specialists and Farm Business Management Instructors should continue to assist and encourage farmers and ranchers to keep better records.

Wilson, R.K. (1987). High school administrator's perceptions toward supervised occupational experience programs in the central district of Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The main purpose of the study was to determine the perceptions of central district superintendents and high school principals toward Supervised Occupational Experience Programs and what effect those perceptions have on the programs. The survey consisted of 71 schools and 142 administrators in the central district of Oklahoma. A questionnaire was developed and two were administered to each of the 71 schools, one for the superintendent and one for the principal. A follow-up questionnaire was distributed to gain a better response. A total of 73 questionnaires were completed and returned for a 51 percent response rate.

The major findings of the study are: the administrators agreed with a three part definition of SOEP, most schools in the central district are located in small communities with one ag teacher, most administrators said the school did not require students to have SOEP's, and almost all schools provided the teacher with a vehicle and visitation time to supervise SOEP's. The major objectives were also ranked with number one being to enhance classroom instruction. The current and future involvement by the students in SOEP's were ranked from 1-8, and the administrators said that SOEP's should not have set guidelines to be followed by all schools.

Wittrock, K.J. (1987). The major sources, uses and availability of agricultural credit as reported by lending institutions in a two county area in west central Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The availability of agricultural credit to the farmer or rancher was vital to his survival. All agricultural lenders with offices in Kingfisher and Blaine counties were contacted and their characteristics identified.

There were seventeen credit institutions in Kingfisher and Blaine counties. Fifteen of the seventeen institutions replied to the mail questionnaire. Of the banks surveyed, twelve (70.59%) had full time farm credit officers. Fourteen (82.35%) of the firms made both real estate and chattel loans. Land and livestock purchases ranked high for the utilization of loan proceeds. The interest rates were primarily between 12.6 percent and 14.5 percent on real estate and 12.1 percent to 14.0 percent on chattel loans. The necessity for foreclosure was because of inadequate cash flow, over-expansion, and mismanagement. Thirteen of the fifteen lenders made loans to high school students, of which none were for real estate purposes. The appraised value of collateral for real estate

and chattel loans averaged between 75.61 percent to 78.61 percent respectively. Fourteen of the fifteen lenders believed greater borrowing would not help the economy. Institutions required customers to provide financial statements, cash flow plans, and balance sheets and previous tax records for loan approval. Loan institutions used semi-annual repayment schedules. The economy of Kingfisher and Blaine counties would not be more prosperous if farmers borrowed in larger amounts. Repayment ability and honesty were the leading factors considered in establishing good credit ratings. Suppressed market prices and repayment ability were regarded as the biggest problems in securing credit. Clients of financial firms were not required to participate in educational programs. Lenders and educators should continue to assist, encourage, and educate farmers and ranchers to keep better records.

Dayberry, D.T. (1987). Mathematics and science provided through vocational agriculture in Texas. Doctoral Dissertation, Texas A&M University, College Station.

The purpose of this study was to determine the degree to which teachers and students of vocational agriculture believed they were providing or were being provided instruction on topics in vocational agriculture that contained concepts and skills in mathematics and science.

The population consisted of 1,500 teachers of vocational agriculture and their 30,000 students of Vocational Agriculture I (Vo-Ag I) and Vocational Agriculture II (Vo-Ag II) in Texas during the 1985-86 school year. Two hundred programs were selected randomly to receive questionnaires. One hundred programs received questionnaires for Vo-Ag I and 100 programs received questionnaires for Vo-Ag II. Total response was 59 of the Vo-Ag I programs and 61 of the Vo-Ag II programs.

Major findings were as follows: 1) Teachers used a majority of the curriculum materials that contained concepts in mathematics and science (66 percent of topical materials). 2) Teachers believed they taught the material for different subject matter areas to varying degrees, but overall, they believed they taught the subject matter areas from moderately to thoroughly. 3) Overall, students believed they were taught the subject matter to a moderate degree, consistently rating their being taught lower than teachers rated their teaching. 4) Overall, as the teachers' perceived use of the curriculum, materials increased, both the teachers' and students' perceived degrees of teaching and being taught the subject matter increased.

The following conclusions were made as a result of the findings: Teachers and students of Vocational Agriculture I and II believed they were teaching and were being taught the subject matter contained in the curriculum materials that were identified by a jury of experts as containing concepts in mathematics or science. It follows, then, that because teachers were teaching, and students were being taught the subject matter, concepts and skills in mathematics and science were being taught through vocational agriculture.

Fehlis, C.P. (1987). A correlation study of various selection criteria and the professional success of Texas county extension agents - agriculture. Doctoral Dissertation, Texas A&M University, College Station.

The purpose of this study was twofold. One was to identify the basic criteria used by District Extension Directors - Agriculture (DEDs-Ag) in Texas in the selection of entry level County Extension Agents - Agriculture (CEAs-Ag). The second was to examine the relationships between the selected qualifications of CEAs-Ag at hiring and their professional success as determined by the performance evaluation instrument used by the Texas Agricultural Extension Service.

The population to determine the basic selection criteria was 11 DEDs-Ag in the TAEX who had conducted performance evaluations with the CEAs-Ag that they supervised during the 1984 and 1985 calendar years. The sample to determine the actual qualifications that the CEAs-Ag possessed at the time they were employed by the TAEX was 134 CEAs-Ag who had from 5 to 15 years experience with the TAEX. The performance evaluation scores of these CEAs-Ag for 1984 and 1985 were used as the dependent variable.

The DEDs-Ag identified 17 objective criteria that they rated as average or higher in importance in selecting entry level employees into the TAEX. Nine objective criteria were rated below average in importance. They identified 10 subjective criteria as being average or higher in importance while only one subjective criterion was rated below average in importance. The subjective criteria as a group were rated as more important to the DEDs-Ag in making selection decisions than the objective criteria as a group. The data revealed that there were no significant relationships between any of the identified criteria and the ultimate performance of the CEA-Ag as determined by the TAEX performance evaluation instrument. There was a significant relationship between tenure and performance evaluation scores of the CEAs-Ag. Since the data indicated that there were no significant correlations between any of the selection criteria and the success of the CEAs-Ag, multiple regressions were not computed on the data.

Gresham, J.N. (1986). Expressed satisfaction with the nominal group technique among change agents. Doctoral Dissertation, Texas A&M University, College Station.

The purpose of this study was to determine whether or not policymakers and change agents with differing professional backgrounds and responsibilities, who participated in the structured process of a nominal group in the setting of diverse decision-making and problem-solving conferences, would express satisfaction with the nominal group technique used. Four conferences at Texas A&M University involving 206 participants

with the Nominal Group Technique (NGT) as a tool for identifying and solving problems. The conferences, held between May 1985 and July 1986, were for international food and water policy, the Texas Agricultural Extension Service, an English language curriculum, and school principals.

Analyses of the data concerned with the independent variables were 1) previous use of NGT, 2) understanding of the purpose of the NGT, 3) background and profession of participants, and 4) particpation in other group activities.

The dependent variables were "attitude items" on a one-page instrument reflecting levels of satisfaction with various aspects of involvement in nominal groups grouped into three theoretical constructs to facilitate comparison of data from the conferences. The constructs were 1) usefulness of the NGT 2) personal involvement in the NGT, and 3) comparison of nominal groups with other previously used, non-NGT group activities. Phi, Pearson, and Point B-Serial corrleations were performed to test expressed satisfaction with NGT as affected by the independent variables, as well as by interactions with dependent variables.

Participants in all four conferences expressed general satisfaction with the nominal group technique with respect to their personal involvement, the usefulness of nominal groups, and with the nominal group technique as compared with other previously used, non-NGT group activities.

Ahmed, I. (1986). Appropriate technology cultivator for less developed countries. Master of Science Thesis, Utah State University, Logan.

The purpose of this study was to develop an appropriate technology cultivator to be used by the subsistence farmers in less developed countries (LDCs). With appropriate jigs and patterns, this cultivator could eventually be manufactured in LDCs with locally available materials, thereby reducing their dependency on foreign made tools and machinery. Material cost at the 1986 market price was 635 Shillings ($4.88) in Somalia, and Taka 101 ($2.92) in Bangladesh.

Ekstrom, W. A. (1986). A comparison of employee manpower skills and competency skills for Utah's ornamental horticulture industry in 1979 and 1986. Master of Science Thesis, Utah State University, Logan.

This study was conducted in an effort to assess the manpower and competency needs of Utah's ornamental horticultural industry and provide vocational educators, vocational teacher educators, and extension agents with meaningful information to assist them as a recommendation in the development of educational curriculum to meet the needs of the state and local ornamental horticulture industry.

This research is a replication study of a previous study conducted by Dennis Bahen (1979), it deals with the manpower demand characteristics for the seven areas of the ornamental horticulture industry: arborists, maintenance of landscapes, landscape construction, golf course, greenhouse production, florist-plant shop, and garden center-nursery, and the competency skills for the following three areas: greenhouse production, florist-plant shop, and garden center-nursery. It, therefore, establishes changes that have occurred in Utah's ornamental horticulture industry. Comparisons of data collected from the two studies were made and tested for significant differences.

From the target population of 956 ornamental horticulture enterprises, a random sample of 220 was drawn. One hundred and eighteen ornamental horticulture enterprises responded to the survey. This was 54% of the industry sampled and 12.4% of the population. A reliability check was conducted between a random sample of non-respondents and compared to the findings from the respondents, and indicated no significant differences existed.

Some of the major findings include the following: 1) The demand for new employees has exhibited a yearly increase of 10.8%

since 1979, resulting in 11,137 employees currently employed in ornamental horticulture. Respondents have indicated they will hire an additional 22% or 2,438 new employees by 1988. 2) The highest growth areas in the ornamental horticulture industry were landscape construction and greenhouse production. 3) According to the two surveys, there was a commonality of competencies needed by all who enter an ornamental horticulture occupation. Competencies ranked important with all areas of specialization included: human relations and communication skills; observation and completion of tasks that need to be completed; pest identification and control; record keeping; and plant identification.

Mickelson, T. V. (1986). Manpower and training needs of landscape activities in ornamental horticulture in Utah. Master of Science Thesis, Utah State University, Logan.

The purpose of the study was to present descriptive data about the industry, determine the relative importance of the studied competencies for job entry, and to assess the manpower needs of the landscape industry in Utah.

The study intentionally omitted home centers, building centers, grocery stores, and other businesses who may stock and sell some flowers and plants as a convenience item, but do not make the sale or production of horticulture products a major portion of their business. A sample of 274 horticulture enterprises were surveyed from an identified population of 956. These were then categorized into two broadly defined areas: landscape activities and greenhouse activities. This report treats mainly those four specialty areas directly involved with landscape activities, namely: arborist, landscape maintenance, landscape construction, and golf course. These four areas account for 47.5% of all horticulture businesses while hiring 60.3% of the full-time workers in the horticulture industry. Employment in landscape activities has increased 56% in the two years from 1984 to 1986. Employers anticipate hiring 3,215 additional workers in this field by 1988.

Employers were asked to rate 93 competencies for importance for entry level workers. While the overall ratings were down from previous studies, the order of importance was still consistent with those reported in other studies. The general trend is still to look first for interpersonal relationship skills, then verbal and written communication skills, followed by safety, and then basic horticulture skills. Specific skills for specific portions of the industry were understandably rated lower because of the broad nature of the survey and the wide diversity of skills used in the industry.

A major paradox found in the study was that even though employers claim to prefer trained workers, they do not look to the vocational training programs in the state to supply new workers. Researchers recommend that vocational teachers involve industry personnel in their programs to increase awareness of, and reliance on, vocational training.

Mojavery, F. G. (1986). Seedling emergence of spring wheat under conservation tillage as affected by planting date and seeding depth. Master of Science Thesis, Utah State University, Logan.

Conservation tillage farming systems and concepts have evolved rapidly since the early 1960s and are attracting attention world wide. Although principles of conservation tillage are the same regardless of geographical area, the applications are not. The application of conservation tillage principles requires considerable modification as variation in soil and/or climate conditions are encountered in different regions of the world.

The affect of planting depths and planting dates on spring wheat seedling emergence in northern Utah is poorly understood. Research was conducted in Logan, Utah, to determine the effects of two depths, 2.5 and 5.1 cm (1.0 and 2.0 inches), and three planting dates (May 15, 23, 31), on seedling emergence of hard red spring wheat (Triticum Aestivum "BANNOCK" cultivar) along a time interval of 24 days. The wheat was planted using a modified conservation tillage grain drill developed by the Department of Agricultural Education at Utah State University.

Results of that investigation show that planting earlier in the spring (i.e., May 15) will result in a higher percent of seedling emergence. A 2.5 cm (1.0 inch) planting depth resulted in a higher percent of seedling emergence than a 5.1 cm (2.0 inches) depth.

Similar trials should be conducted at different sites in northern Utah for adequate area-wide recommendations.

Ojomo, C. O. (1987). The feasibility of artificial insemination of dairy cattle managed by Fulani tribesmen. Master of Science Thesis, Utah State University, Logan.

This study sought to determine: a) the essential elements of a viable artificial insemination program for the Fulani Tribesmen in Kaduna State, Nigeria, and b) to determine if the essential elements of a viable artificial insemination program exists in Kaduna State, Nigeria. This study was conducted from April 15 to May 15, 1985, in the Artificial Insemination (AI) Subcenters of

Zaria, Katsina, Kabomo, Kaduna, Ikara, Zonkwa, Kurmin-Biri, and Kauranjuli.

The data presented in this study were collected by personal interviews with Fulani Tribesmen. The population of this study was from a partial list of Fulani Tribesmen who have had AI performed on their dairy cattle by the cooperative inseminators in the subcenters. The statistical analysis showed an overview of herdsmen reactions to each question. The use of additional statistical tests to determine the degree of significance was not appropriate because the respondents were not randomly selected. The writer did not know in advance the number of Fulani Tribesmen that constituted the total population of the AI system in the subcenters.

Non-economic analysis of this research study includes five linked essential elements of a viable AI program. These elements are: 1) high performance bulls with quality semen, 2) skilled dependable AI technicians, 3) healthy cows, 4) functional communication and transportation resources, and 5) cooperative and informed farmers.

This study concluded that four of the five essential elements for a viable AI program currently do not exist for the Fulani Tribesmen in Kaduna State, Nigeria. As a result of this study, it was determined that a viable AI program for the Fulani Tribesmen in Kaduna State, Nigeria, is not feasible under the present situation.

Rose, M. E. (1986). A model for testing draft requirements of some tillage equipment in Utah. Master of Science Thesis, Utah State University, Logan.

This thesis was designed as a model for testing draft requirements. A Tye Pasture Pleaser conservation till drill and a Case two-bottom plow were drawn using a John Deere 2640 tractor.

Data gathered included draft, RPM, and actual ground speed. Data were gathered using a hydraulic system. A hitch was designed and constructed for use with this system and equipment of the drawbar design. Data were recorded using a Campbell Scientific 21X Micro Logger and a Campbell Scientific CR56 printer.

Variables included soil textures, soil moisture, percent clay, soil volumetric bulk density, and ground speed. Analysis revealed an R sq value of 27.7 percent for the plow and 76.1 percent for the Tye Pasture Pleaser conservation till drill.

Sadeghmoghaddam, G. (1986). Conversion of a conventional grain drill to allow pararow spacing using Acra-Plant double-disk drill modules. Master of Science Thesis, Utah State University, Logan.

Two areas were of increasing interest and importance in agricultural mechanization research at Utah State University: minimum tillage planting and narrow row spacing. A problem for the small farmer has been that minimum tillage planters with narrow row capabilities are too expensive. Keeping the costs down and the design simple could be feasible for the small farmer. This project was a continuation of work done previously at Utah State University for the purpose of developing a conversion plan that would allow converting a conventional grain drill to minimum tillage capabilities.

The modified grain drill built for this project was a John Deere Conventional Planter Model LZ-B and a New Holland Fertilizer Box Model 410, using Acra-Plant Disk Drill Modules Model 3010. An economical modified grain drill capable of minimum tillage planting, allowing for pararow spacing and deep banded fertilizer between the pararows was developed.

VIRGINIA

Crunkilton, J. R. (1986). Graduate programs of international students studying agricultural education in the United States with implications to the International Training Program at the American Farm School in Greece. Staff study, Virginia Polytechnic Institute and State University, Blacksburg.

The overall objective of this study was to review the graduate programs of international students studying agricultural education in the United States for the purpose of identifying implications for the International Training Program at the American Farm School. It was also the intent of this study to assess the degree of interest that international students would express in attending this Training Program offered by the Farm School.

Data was collected by a mailed questionnaire from 86 international students studying Agricultural Education in the U.S.

Major findings of the study were: (1) 84 percent of the students were pleased with their graduate programs, (2) the most common professional education courses taken were extension, program planning and adult education, (3) courses least taken were special needs, counseling, and financing education, (4) more common technical agricultural courses taken were agricultural economics, agronomy, and animal science, (5) students desired more hands-on experiences in agricultural production techniques and internship in extension, and (6) 93 percent indicated an interest in attending the International Training Program.

WEST VIRGINIA

Boggs, B. (1986). Major distinguishing characteristics of successful adult volunteer 4-H club leaders. Master of Science Thesis, West Virginia University.

The primary objective of this study was to determine the major characteristics of successful adult volunteer 4-H club leaders in West Virginia as perceived by West Virginia 4-H agents. Data were obtained from 4-H agents in all 55 counties of the state. A modified delphi technique was used to collect data. Of the 37 characteristics identified by participants, the most important were: accepts all kinds of youth, flexible, enthusiastic, responsible, open and honest, relates well, motivated, and a desire to help young people. Few differences were noted when data were categorized by years of service or gender of 4-H agents. Females, however, tended to rate all items more important than did males.

Coughlin, M. T. (1987). Benefits and problems experienced by spouses of vocational agriculture teachers in West Virginia. Master of Science Thesis, West Virginia University.

This study was designed to (a) identify benefits spouses receive in being the husband or wife of a vocational agriculture teacher, and (b) identify problems spouses experience in being the husband or wife of a vocational agriculture teacher. Spouses were asked to identify the two major benefits and the two major problems in being the spouse of a vocational agriculture teacher. Items were then compiled into a questionnaire and rated by all spouses. Major perceived benefits were primarily job security and spouse achievement related, whereas major perceived problems included long hours, stress and insufficient remuneration.

Cox. G. O. (1986). Livestock skills possessed by production agricultural teachers in West Virginia and taught in vocational agriculture classes. Major of Science Thesis, West Virginia University.

Objectives of this study were to determine perceived abilities of West Virginia vocational teachers to perform essential livestock skills and to ascertain the livestock skills being taught, the methods used, and the amount of practice students receive. Data were collected from West Virginia vocational teachers through use of a questionnare developed by Osborne (OSU) and modified by the researcher. Data indicated

that the average teacher has performed sheep and cattle skills to a greater degree than swine and poultry skills. Teachers expressed relatively low degrees of confidence for demonstrating the set of 46 livestock skills. Skills were primarily acquired on the home farm and while teaching vocational agriculture. Discussion method was the primary approach to teaching livestock skills.

Fincham. D. M. (1986). Young and/or adult agriculturist program needs in Jefferson County, West Virginia. Master of Science Thesis, West Virginia University.

This study was designed to determine the educational needs which exist for young/adult farmers and agriculturists in Jefferson County, West Virginia, and to identify areas of interest that might be of greatest value to program participants. Questionnaires were designed and mailed to a random sample of agriculturists whose names appeared on extension office lists. A 60% response was obtained. Data indicated that 72% of the respondents were interested in attending and participating in young/adult agriculturist programs. Major interests were expressed in management, livestock, crops and soils, mechanics and special and political topics. While a variety of teaching methods were desired, respondents expressed high interest in bringing in speakers on selected topics.

Maines, W. M. (1987). Characteristics needed to be a highly successful extension agent in agriculture in West Virginia as perceived by county extension agents, state extension specialists, and state extension administrators. Master of Science Thesis, West Virginia University.

Objectives of this study were to determine major characteristics needed to be a highly successful extension agent in agriculture as perceived by extension agents, specialists, and administrators, and to determine relationships of demographic characteristics and characteristics perceived necessary to be a highly successful extension agent. Data were collected via two questionnaires sent to the population of agents, specialists and administrators. The first asked each one to identify the five characteristics which, in his/her opinion, are most important in a successful agent. The second consisted of the 66 different characteristics identified, and requested the same populations to rate importance of each characteristic listed. Characteristics considered absolutely

essential in a successful agent were "must be able to say 'I don't know'" and "oral communication skills." Other professional characteristics considered most important included the ability to translate information into laymen's terms, ethics, teaching skills, organizational skills, problem solving skills, written communication skills, and time management skills. In general, agents, specialists and administrators were in agreement with respect to essential characteristics.

WISCONSIN

Petrick, G. H. (1987). Personality characteristics of groups of Wisconsin vocational, technical and adult education instructors. Doctor of Philosophy Thesis, The University of Wisconsin, Madison.

The purpose of the study was to determine if a personality type is associated with a particular group of instructors.

The concept of personality type was limited to determining the proclivity for one mode of cognitive behavior as opposed to another, which is measured by the Myers-Briggs Type Indicator (MBTI). The Myers-Briggs Type Indicator produces preference scores of individuals relative to the following continuums: extraversion-introversion, sensing-intuition, thinking-feeling, and judgment-perception.

The population for the study consisted of full time instructors in the Wisconsin Vocational, Technical, and Adult Education (VTAE) system who taught in the disciplines of Agriculture, Trade and Industry, Business, and General Education. Using a table of random numbers, an equal sample size of 40 respondents was selected from each discipline. Data collection was by questionnaire, through the mail. A follow-up of non-respondents indicated that they may differ from instructors who returned questionnaires.

Using analysis of variance, a significant difference was found between General Education instructors and instructors teaching in specific occupational areas relative to their sensing-intuition score. A separate analysis indicated a significant difference in the same score between instructors teaching in different subject matter categories. Post hoc comparisons found that General Education instructors differed from Agriculture instructors and Business instructors on this index but did not differ from Trade and Industry instructors. No other significant differences were found.

It was concluded that the groups of Wisconsin VTAE instructors studied do not differ in their MBTI mental preferences based on their type of in-service, amount of in-service, or reference group affiliation. General Education instructors tend to perceive information more in terms of intuition than do Agriculture or Business instructors.

WISCONSIN

Geiger, Calvin R. "A Needs Assessment of Articulation Between the Moraine Park Technical Institute of Wisconsin and Secondary Vocational Agriculture Programs." Masters Thesis, 1987, University of Wisconsin-River Falls, River Falls, Wisconsin.

The research problem was to assess the perceived need for articulation of secondary vocational agriculture programs with the Moraine Park Technical Institute in Wisconsin. A comparison was made between the personal characteristics of the secondary school superintendents, principals, guidance counselors, agriculture instructors, and agricultural advisory council members with their perceived need for articulation.

After extensive review of the literature, the Data for the survey were obtained from the secondary school superintendents, principals, guidance counselors, agriculture instructors, and agricultural advisory council members through the means of a written questionnaire. The secondary schools included in the survey were those which are located in the Moraine Park Technical Institute district of Fond du Lac, Wisconsin. Eighty-five questionnaires were sent and 62 percent of the questionnaires were returned. A five point Lickert-type scale was used to process the data obtained from the questionnaires.

The respondents perceived student services, school coordination, credit transfer policies, student transfer policies, student placement opportunities, resource sharing and curriculum review as very important factors in the articulation process. There is a significant difference between the respondent's local years experience in their present position and the perceived need for articulation and a signficant difference between the enrollment of the secondary school and the perceived need for articulation. There is also a significant difference in the mileage between the secondary school and the MPTI campus and the perceived need for articulation.

The major recommendations include: 1) More research needs to be conducted on the effect of school size and school program diversity upon articulation between secondary and post-secondary agricultural programs; 2) Schools that have a small vocational agriculture programs should address articulation procedures with a VTAE campus; 3) Schools with small enrollments and located long distances from the VTAE campus should investigate a means to improve the articulation process between secondary and post-secondary agricultural programs.

Mercer, L. E. (1986). Perceptions of FFA Alumni President Support of the Local FFA Chapter. Master of Science Thesis, University of Wisconsin-River Falls, River Falls.

The purpose of the study was to access selected characteristics and selected perceptions of FFA Alumni affiliate presidents of selected local affiliates in Wisconsin. The assessment compared personal characteristics of age, educational background, employment, leadership background, and years of FFA Alumni membership.

The population studied was FFA Alumni presidents in Wisconsin during the 1985-86 school year. Eighty-one percent of the sample population responded to a mailed questionnaire. A five point Likert-type scale was used to process the collected data.

Major findings of the study indicated there was a significant difference between the local FFA Alumni presidents' age and their perception of the number of FFA Alumni affiliate projects per member each year. There was also a significant difference between the local FFA Alumni presidents' education and their perception of providing leadership to the FFA Alumni affiliate.

The major recommendation included: 1) A follow-up study should be conducted of FFA Alumni presidents in a different region of the United States; 2) More research on the types of activities that FFA Alumni presidents consider important at the local affiliate level; 3) Research on FFA Alumni presidents' methods of recruiting new FFA Alumni members; and 4) Conduct a study on what FFA Alumni presidents' perceive as adequate leadership training to have a successful local FFA Alumni affiliate.

O'Neil, D. J. (1987). An Assessment of Selected Professional Competency Levels and Training Needs of Extension Agricultural Educators in Wisconsin. Master of Science Thesis, University of Wisconsin-River Falls, River Falls.

The purpose of this study was the assessment of selected professional competency levels and professional competency training needs of Extension agricultural educators in Wisconsin. The assessment compared years of Extension educator experience with perceived competence and perceived need for additional training in selected professional competency items.

The population included Extension educators in Wisconsin with fifty percent or more of their time assigned to agricultural education. Eighty-four Extension educators were identified as fitting the population. Data were collected using a mailed questionnaire. Two five point Likert-type scales were used in the design of the questionnaire. Eighty-four percent of the Wisconsin Extension agricultural educators contained in the population responded to the questionnaire.

Major findings of the study were: 1) a majority of Extension agricultural educators have ten years or less Extension experience; 2) 97 percent of the Extension educators responding in the study were male; 3) there is no significant relationship between years of Extension experience and perceived competence in program planning, program execution or program evaluation; 4) there is no significant relationship between years of Extension experience and perceived need for training in program planning, program execution, or program evaluation; 5) the highest reported values for training needs were in the program planning category.

Based on the findings and the conclusions of the study, the following recommendations were made: 1) conduct research on the job satisfaction level of Extension agricultural educators; 2) inservice training needs ought to be offered that is related to the development of annual and four year plans of work; 3) study methods to increase the number of female Extension agricultural educators in Wisconsin; 4) inservice training should be offered in the development of valid and reliable instruments for evaluating Extension agricultural programs; 5) additional research needs to be conducted regarding competence and training needs in the program planning area.

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The purpose of this study was to determine the level of importance of animal science competencies taught in Wyoming vocational agriculture programs. Ninety-six competencies were ranked according to degree of importance by vocational agriculture instructors, Wyoming stockgrowers, and Wyoming woolgrowers using a weighted mean score. The competencies were grouped into major enterprises for analysis purposes. The preventing and treating of common diseases was rated by Wyoming stockgrowers, Wyoming woolgrowers and Wyoming agriculture instructors as the most important competency area with an average mean score of 3.52 based on a maximum rating scale of 4 being equal to "essential." The conclusions drawn were that (1) the stockgrowers and woolgrowers expressed a high degree of interest in the study and that (2) the ratings given by teachers were slightly higher than those of stockgrowers and woolgrowers.

Epler, Randy A. (1987). Determining the Level of Importance of Selected Crop and Soil Science Competencies as Perceived by Wyoming Vocational Agriculture Teachers and Soil Conservation Service Personnel. Master of Science thesis, University of Wyoming, Laramie.

This study was conducted to determine the level of importance of crop and soil science competencies needed by students in Wyoming vocational agriculture programs. All Wyoming vocational agriculture teachers and Soil Conservation Service personnel were asked to rank the degree of importance that selected crop and soil science competencies should be taught using a rating scale of one to four with 4 equaling essential and 1 being equal to not important. Fifty-seven competencies were ranked using a total mean score value. Agriculture chemicals was the highest rated area by the Wyoming vocational agriculture teachers and Soil Conservation Service personnel with a total mean score of 3.33. The competencies, identify parts of a seed, lowest, each receiving a mean score of 2.23.

The findings of the study include the following: (1) a high degree of interest was indicated by Soil Conservation Service personnel, (2) the ratings given by teachers and Soil Conservation Service personnel on crops and soils competencies were very similar, (3) a significant difference was obtained on the ratings by the two groups on most range management competencies.

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The findings of this study provided a guide for level of current funding. The mean total of the budget items included was $12,611.29 for 1986. The average for the respective budget items were, (1) shop supplies, $4,571.67; (2) travel, $4,816.86; (3) supplies. The analysis on a per student basis revealed an average expenditure of $332.82 per student for all budget items. Additional costs paid by students averaged $188.24 in 1986. Teachers reported an average projected need of $2,691.24 per department above the amount actually received.

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Activities in Agricultural Education

1974-1975 - Dr. J. David McCracken, The Ohio State University
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